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SEI SOFTWARE ENGINEERING EDUCATION DIRECTORY(U)
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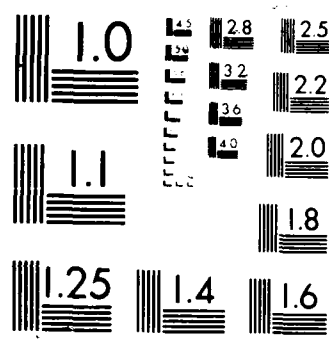
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Technical Report

CMU/SEI-87-TR-3

ESD-TR-87-103



Carnegie Mellon University

Software Engineering Institute

SEI Software Engineering
Education Directory

Albert Johnson

February 1987

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Software Engineering Institute

Technical Report

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SEI Software Engineering Education Directory

Albert Johnson

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Carnegie Mellon University

Pittsburgh, Pennsylvania 15213

This technical report was prepared for the

SEI Joint Program Office
ESD/XRS
Hanscom AFB, MA 01731

The ideas and findings in this report should not be construed as an official DoD position. It is published in the interest of scientific and technical information exchange.

Review and Approval

This report has been reviewed and is approved for publication.

FOR THE COMMANDER


Karl H. Shingler
SEI Joint Program Office

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SEI Software Engineering Education Directory

Foreword

The Software Engineering Institute is a new federally funded research and development center, sponsored by the Department of Defense, and operated by Carnegie Mellon University. The mission of the SEI is to serve the public interest by establishing the standard of excellence for the art and practice of software engineering and by accelerating the transition of software technology.

The purpose of this directory is twofold. First, it should help people make rational choices among software engineering courses and software engineering degree programs by presenting a detailed listing of what courses and programs are available. The other major purpose is to establish and maintain contact between the SEI and the institutions which offer these courses and programs.

The teamwork and energy of Mark Chweh, Dana Hausman and Keith Mohammed were crucial to the successful completion of the first edition of this directory. Susan Dunkle and the Information Services staff of the SEI were helpful in developing its attractive layout. We extend our thanks to all who aided this effort.

Albert Johnson
Technical Project Administrator

Guide to the Use of the Directory

Compilation of Entries

Compilation of entries for this directory began in the summer of 1986 with a questionnaire mailed to schools selected from Peterson's *Graduate Programs in Engineering and Applied Sciences 1986*. We surveyed the schools which offered graduate degrees in Computer Engineering, Computer Science, Information Science, Software Engineering, and Systems Engineering because they seemed most likely to offer courses involving software engineering concepts.

Of the 456 questionnaires mailed, over 33% were returned. A random telephone survey of 15 people who did not return questionnaires for their universities revealed that none offered courses which they felt were related to software engineering. Thus we feel that the directory is reasonably complete, although it is probably missing a few schools.

Schools which responded to our survey, but did not offer any relevant courses may appear in the printed results because they maintained that they might do so in the not-too-distant future. These schools will have **N X X** where the course entries would appear. The **N X X** is not an acronym, but only the null values for course, textbook and system entries which are automatically inserted by the database management system that produces the text.

Notation

Each degree entry has one or two parts. The first part is the degree and the second part, if present, is the subject. The abbreviations used are:

DEGREES

B	Bachelor Degree
BA	Bachelor of Arts
BBA	Bachelor of Business Administration
BC	Bachelor of Commerce
BCS	Bachelor of Computer Science
BE	Bachelor of Engineering
BED	Bachelor of Education
BEECS	Bachelor of Elec. Eng. and Comp. Sci.
BM	Bachelor of Mathematics
BS	Bachelor of Science
BSE	Bachelor in Science & Engineering
BSSE	Bachelor of Systems Science & Eng.
BO	Bachelor Degree (Other)

SUBJECTS

AI	Artificial Intelligence
AT	Advanced Technology
BA	Business Administration
CE	Computer Engineering
CIS	Computer & Information Sci.
	Computer Info. Systems
CM	Computer Management
CP	Computer Programming
CS	Computer Science
CSE	Computer Sci. Engineering
	Computer & Systems Eng.
	Computer Systems Engineering
CSED	Computer Science Education
CT	Computer Technologies

M	Master Degree	E	Engineering
MA	Master of Arts	EE	Electrical Engineering
MCS	Master of Computer Science	IE	Industrial Engineering
ME	Master of Engineering	IS	Information Science
MED	Master of Education		Information Systems
MEM	Master of Engineering Management	ISE	Industrial & Systems Eng.
MM	Master of Mathematics	M	Mathematics
MS	Master of Science		Mathematical Sciences
MSDD	Master of Software Design & Dev.	MIS	Management Information Sys.
MSE	Master of Software Engineering	SE	Software Engineering
MSSM	Master of Systems Science & Math.	SSM	Systems Science & Engineering
MO	Master Degree (Other)	SYSE	Systems Engineering
		SYSS	Systems Science
DENG	Doctor of Engineering		
PHD	Doctor of Philosophy	O	Other
SCD	Doctor of Science		
O	Other		

Each course entry has six parts. The abbreviations used in the entries are:

Level:

U	Undergraduate
G	Graduate
B	Both
O	Other
X	No information supplied

Prerequisite:

P	The course has at least one prerequisite
N	None

Status:

R	Required
E	Elective
B	Both
O	Other
X	No information supplied

Frequency:

- B Biennial
- Y Once a year
- T Once a term
- A Alternate terms
- D On demand
- O Other
- X No information supplied

A complete course entry has six fields, arranged in order of course name, course number, level, prerequisite, status and frequency. Here are examples from the directory:

Courses: **Software Engineering** Comp 3653 U P B Y
Textbooks: *Applying Software Engineering Principles*, Maria
Systems: Cyber Turbo Dos
 Variety of Micros

Courses: **Introduction to Software Engineering with Ada** MATH 555 G N R T
Textbooks: *Software Engineering with Ada*, Booch, Grady
 Data Structures with Ada, Feldman
 Ada Primer, Softech, Inc.
 Ada Programming Language, (MIL-STD-1815A)
Systems: Vax 11/785 VMS

Additions and Revisions

The directory is an ongoing effort of the SEI Education Program, and will be regularly revised. Please direct all related correspondence to Albert Johnson, Software Engineering Institute, Carnegie Mellon University, Pittsburgh, PA 15213.

Software Engineering Institute Software Engineering Education Directory

Acadia University; School of Computer Science;
Wolfville, NS; B0P 1X0 Canada

Degrees: BCS, MS

Contact: Dr. Oliver, Leslie H.
Director
(902) 542-2201

Courses: **Software Engineering** Comp 3653 U P B Y
Textbooks: *Applying Software Engineering Principles*, Maria
Systems: Cyber Turbo Dos
Variety of Micros

Air Force Institute of Technology; School of Engineering;
Department of Electrical and Computer Engineering;
Wright-Patterson AFB, OH; 45433 United States

Degrees: MS, MS EE, PHD

Contact: Dr. Howatt, James W.
Assistant Professor of Computer Systems
(513) 255-6913

Courses: **Software Engineering Management** EENG543 G N R A
Textbooks: *Principles of Productive Software Management*, Evans, Piazza, and Dolkas
Systems: VAX 11/785 VMS

Software Engineering Techniques EENG593 G P R T
Textbooks: *Software Engineering*, Sommerville
Systems: VAX 11/785 VMS

Software Systems Programming Laboratory EENG690 G P R A
Systems: LAN connecting PDP 11/70 processors

Advanced Software Engineering Laboratory EENG696 G P E Y
Textbooks: *Software System Testing*, Beizer
Systems: VAX 11/785 VMS

Advanced Software Engineering EENG793 G P E Y

Introduction to Software Engineering with Ada MATH 555 G N R T
Textbooks: *Software Engineering with Ada*, Booch, Grady
Data Structures with Ada, Feldman
Ada Primer, Softech, Inc.
Ada Programming Language, (MIL-STD-1815A)
Systems: VAX 11/785 VMS

Advanced Software Environments MATH755 G P E Y
 Textbooks: *Programming with APSE software Tools*, Freedman
Research Directions in Software Technology, Wegner
 Systems: VAX 11/785 VMS

Arizona State University; College of Engineering and Applied Science;
 Department of Computer Science;
 Tempe, AZ; 85287 United States

Degrees: BS, MS, PHD

Contact: Dr. Collofello, James S.
 Associate Professor of Computer Science
 (602) 965-3190

Courses: **Software Project and Development I** CSC 460 U P E T
 Systems: VAX UNIX

Software Project Management and Development II CSC 560 G P E T
 Textbooks: *IEEE Tutorial on Cost Estimation*
Software Configuration Management, Bersoff and Siegel

Software Requirements CSC 563 G P E Y
 Textbooks: *IEEE Tutorial*

Software Design CSC 564 G P E Y
 Textbooks: *IEEE Tutorial on Design*

Software Testing CSC 565 G P E Y
 Textbooks: *IEEE Tutorial on Testing*

Software Maintenance CSC 566 G P E Y

Special Topics in Software Engineering CSC 590 G P E D

Additional Information:

Textbooks for Special Topics in Software Engineering depend on topic.
 Topics used before are "Software Metrics" and "Software Environments".

Auburn University; School of Engineering;
 Department of Computer Science and Engineering;
 Auburn University, AL; 36849 United States

Degrees: BS, MS, PHD

Contact: Dr. Vick, Charles R.
 Head
 (205) 826-4330

Courses: **Introduction to Software Engineering** CSE 305 U N R T
 Textbooks: *Systems Analysis for Applications Software Design*, Brown
 Systems: Personal Computers

Software Engineering I CSE 522 B P E Y
 Textbooks: *Software Engineering*, Shooman

Software Engineering II CSE 622 G P E Y

Textbooks: *Input Output Requirements Language* (IORL Reference Manual), Teledyne Brown Engineering
 Systems: Apollo Domain TAGS Software Engineering Environment

Ball State University: College of Sciences and Humanities;
 Department of Computer Science;
 Program in Computer Science;
 Muncie, IN; 47306 United States

Degrees: BS, MA, MS

Contact: Prof. Brown, W. F.
 Professor
 (317) 285-8644

Courses: Software Engineering I (Systems Analysis) 497 U P R O

Textbooks: *Systems Analysis - Definition, Process, and Design*, Semprevivo
Structured Analysis and Systems Specification, DeMarco, Tom
Standards Manual for Software Engineering I Systems Analysis (Requirement and
 Systems: VAX Cluster (three 785,one 86500)

Software Engineering II (Design and Development) 498 U P R O

Textbooks: *Structured Analysis and Systems Specification*, DeMarco, Tom
Structured Design, Yourdon, Edward and Constantine, Larry L.
Standards Manual for Software Engineering II (Design and Development)
 Systems: VAX Cluster (three 785,one 86500)

Principles of Software Engineering 580 G N R Y

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: VAX Cluster

Additional Information:

Software Engineering I (Systems Analysis) and Software Engineering II (Design and Development) are offered twice a year.

Boston University: School of Engineering;
 Department of Electrical, Computer, and Systems;
 Program in Systems Engineering, Computer Engineering, Electrical Engineering;
 Boston, MA; 02215 United States

Degrees: BS, MS, PHD

Contact: Prof. Vidale, Richard F.
 Professor
 (617) 353-2808

Courses: Software Engineering ENG SC511 B P R Y

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: IBM 3090 running VPS

Software Engineering MET CS673 G P E Y

Textbooks: *Software Engineering*, Shooman
 Systems: IBM 3090 running VPS

Additional Information:

We also teach two courses, SC465 and EK215 which use the Ada programming language to teach software engineering concepts.

Bowling Green State University; School of Arts and Sciences;
Department of Computer Science;
Bowling Green, OH; 43402 United States

Degrees: BS CS, MS CS

Contact: Dr. Mynatt, Barbee
(419) 372-2339

Courses: **Software Development 464 B P E Y**
Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman
Software Engineering 564 G P E Y

Bradley University; College of Liberal Arts and Sciences;
Department of Computer Science;
Peoria, IL; 61625 United States

Degrees: BS, MS

Contact: Prof. Fendrich, John
Associate Professor
(309) 676-7611 x543

Courses: **Software Engineering I CS 505 B P E Y**
Textbooks: *Software Engineering Economics*, Boehm

Software Engineering II CS 506 B P E Y
Systems: Cyber 830

Microcomputers

Programming Methodology CS 503 B P F O
Textbooks: *The Science of Programming*, Gries, David

Additional Information:

Programming Methodology is offered 1-2 times a year.
Courses in Systems Analysis and Design and Data Base Systems. Also some curriculum changes being generated to make software engineering study at the undergraduate and graduate levels distinct.

Brigham Young University; College of Math and Applied Sciences;
Department of Computer Science;
Provo, UT; 84602 United States

Degrees: B, M

Contact: Prof. Woodfield, Scott N.
Associate Professor
(801) 378-2915

Courses: Software Engineering CS 430 U P R O

Textbooks: *Software Engineering*, Sommerville
Computer Structure Design, Myers

Systems: VAX/VMS UNIX (3B2, VAX)

Software Testing CS 426 U P E O

Textbooks: *Software Testing Techniques*, Beizer

Systems: VAX (UNIX, VMS) 3B2

Systems Analysis CS 425 U P E O

Textbooks: *Structured Analysis and System Specification*, DeMarco
Structured Systems Analysis: Tools and Technology, Gane

Systems: VAX (UNIX, VMS) 3B2

Software Creation CS 525 G P E B

Textbooks: *Tutorial on Software Design Techniques*, Freeman and Wasserman

Systems: VAX (UNIX, VMS) 3B2

Software Maintenance CS 526 G P E B

Textbooks: *Tutorial on Software Maintenance*, Parikh and Zvegintzov

Systems: VAX (UNIX, VMS) 3B2

Software Management CS 527 G P E B

Textbooks: *Software Quality Assurance - A Practical Approach*, Chow

Software Cost Estimation, Putnam

Software Configuration Management, Bryan, Chadbourne, and Siegel

Systems: VAX (UNIX, VMS) 3B2

Additional Information:

Software Engineering, Software Testing, and Systems Analysis are offered 3 times/year.

California Institute of Technology; Division of Engineering and Applied Science;
 Department of Computer Science;
 Pasadena, CA; 91125 United States

Degrees: MS CS, PHD CS

Contact: Prof. Seitz, Charles L.

Professor of Computer Science and Computer Science Option Representative
 (818) 356-6569

Courses: Systematic Programming CS 137 B P X Y

Textbooks: *The Science of Programming*, Gries

Concurrency in Computation CS 139 ab B P X O

Systems: UNIX systems Message-passing concurrent computers

Additional Information:

Concurrency in Computation is offered winter, spring quarters annually.
 Numerous related courses on: Functional Programming, Computer Algorithms,
 Computer Modeling and Data Analysis, Computer Graphics, Design and
 Implementation of Programming Languages, Simulation, Computer-Aided Design

California Polytechnic State University; School of Engineering;
 Department of Computer Science;
 San Luis Obispo, CA; 93407 United States

Degrees: BS CS, MS CS

Contact: Prof. Beug, Jim
Professor
(805) 546-2824

Additional Information:
Senior Project
Graduate Practicum

California State Polytechnic University, Pomona; School of Science;
Department of Computer Science;
Pomona, CA; 91768 United States

Degrees: BCS, MCS

Contact: Dr. Hillam, Bruce
Department Chairman
(714) 869-3440

Courses: **Software Engineering** CS499 U N E O
Systems: UNIX MicroVAX
IBM AT

Additional Information:
Two classes of Software Engineering are offered per year.

California State University, Chico; College of Engineering, Computer Science and Technology;
Department of Computer Science;
Chico, CA; 95929 United States

Degrees: BS, MS

Contact: Dr. Madrigal, Orlando S.
Professor and Chairman
(916) 895-6442

Courses: **Software Engineering** CSCI 210 U P E T
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
The Mythical Man Month, Brooks, Frederick P., Jr.

Systems Design CSCI 270 U P R T
Textbooks: *Systems Analysis and Design: Traditional and Advanced Concepts and Techniques*, Wetherbe, James C.

System Design Theory CSCI 370 G P E Y
Textbooks: *Tutorial: Software Management*, Reifer, Donald J.
Controlling Software Projects, DeMarco, Tom

Advanced Software Practices CSCI 251 U N E T
Textbooks: *Programming in Ada*, Barnes, John

Software Metrics and Control CSCI 310 G P E O

Software Design CSCI 311 G P E OTextbooks: *Programming Considered as a Human Activity*, Dijkstra, E.*Go To Statement Considered Harmful*, Dijkstra, E.*The Humble Programmer*, Dijkstra, E.*The Mythical Man-Month*, Brooks, Frederick P., Jr.*Chief Programmer Team Management of Production Programming*, Baker, F. T.*Fundamentals of Design*, Freeman, P.*Data Design in Structured Systems Analysis*, Gane, C.P.*Concise Notes on Software Engineering*, De Marco, Tom*A Technique for Software Module Specification with Examples*, Parnas, D.L.**Software Analysis and Testing CSCI 312 G P E O****Additional Information:**

Software Metrics and Control, Software Design, and Software Analysis and Testing are offered Fall and Spring Semesters.

California State University, Northridge: School of Engineering and Computer Science;
 Department of Computer Science;
 Northridge, CA; 91330 United States

Degrees: BS, MS

Contact: Dr. Modesitt, Ken
 Professor
 (818) 885-3398

Courses: Program Design Techniques CS 380 U P R TTextbooks: *Software Design and Development*, Gilbert, Philip

Systems: CDC Cyber 170/750

DEC PDP 11/44

AT&T 3B5

IBM XT

Macintosh

CDC Cyber 170/760

PR1ME

IBM PC

IBM RT

Vax 8300

Software System Development and Laboratory CS 480/480L U P X TTextbooks: *Software Design and Development*, Gilbert, Philip

Systems: CDC Cyber 170/750

DEC PDP 11/44

AT&T 3B5

IBM XT

Macintosh

CDC Cyber 170/760

PR1ME

IBM PC

IBM RT

Vax 8300

Software Engineering CS 580 G N X YTextbooks: *Software Engineering*, Shooman

Systems: CDC Cyber 170/750

DEC PDP 11/44

AT&T 3B5

IBM XT

Macintosh

CDC Cyber 170/760

PR1ME

IBM PC

IBM RT

Vax 8300

California State University, Sacramento: School of Engineering and Computer Science;
 Department of Computer Science;
 Concentration in Software Engineering;
 Sacramento, CA; 95819 United States

Degrees: BS, MS

February 1987

Contact: Dr. Thayer, Richard H.
Professor in Computer Science
(916) 278-6834

Courses: **Computer Software Engineering** CSC 131 U P R T
Textbooks: *Introduction to Software Engineering*, Steward, Donald V.
Current Practices in Software Development: A Guide to Successful Systems, King, David

Computer System Analysis CSC 170 U P E T
Textbooks: *Structured Analysis and System Specification*, DeMarco, T.

Software Engineering Project Management CSC 171 U P E O
Textbooks: *Successful Project Management*, Rosenau, Jr, M.D.

Documentation Design CSC 178 U N E T
Textbooks: *Writing Handbook for Computer Professionals*, Skees, William D.
Systems: Word processors (usually IBM PC)

Senior Project: Part I CSC 190 U P R T
Textbooks: *Guide for Senior Project Documents*, Thayer, Richard H.

Senior Project: Part II CSC 191 U P R T
Textbooks: *Guide for Senior Project Documents*, Thayer, Richard H.

Software Testing and Quality Assurance CSC 196 U P E Y
Textbooks: *Software Testing and Quality Assurance*, Beizer, Boris

Foundation of Software Engineering CSC 203 G N O Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

Software Requirement Analysis and Design CSC 210 G P E Y
Textbooks: *Diagraming Techniques for Analysts and Programmers*, Martin, J. and McClure, C.

Software Engineering Economics CSC 231 G P E Y
Textbooks: *Software Engineering Economics*, Boehm, B.W.
Systems: WICOMO

Advance Computer System Analysis CSC 240 G P E O
Textbooks: *System Analysis and Management: Structure, Strategy and Design*, Steward, Donald V.

Introduction to System Engineering Engr 130 U N E Y
Textbooks: *System Engineering: Methodology and Applications*, Sage

Engineering Economics Engr 140 U N E Y
Textbooks: *Engineering Economics for Capital Investment Analysis*, Tung, Au
Engineering Economic Analysis, Newman, D.G.

Modern Electronic and Electrical Devices E and EE 9 U N E T
Textbooks: *Introduction to Computer Engineering*, Prepara

Additional Information:

Software Engineering Project Management and Advance Computer System Analysis are offered once every one or one and one-half years. Foundations of Software Engineering is required for a MS in Computer Science if student does not have undergraduate foundation in software engineering.

Carleton University; Faculty of Engineering;
 Department of Systems and Computer Engineering;
 Programs in Computer Systems Engineering and Electrical Engineering;
 Ottawa, ON; K1S 5B6 Canada

Degrees: BE, ME, MCS, MS, PHD

Contact: Prof. Bowen, B.A.
 Chairman
 (613) 564-2793

Courses: **Software Engineering** 94.480 U N X Y
 Textbooks: *Software Tools in Pascal*, Kernighan and Plauger
System Design with ADA, Buhr

Digital Systems Engineering 94.533 G N X T

System Design with Ada 94.531 G N X T

Carnegie Mellon University; School of Computer Science;
 Department of Computer Science;
 Pittsburgh, PA; 15213 United States

Degrees: PHD

Contact: Prof. McDermott, John
 Principal Scientist/Associate Department Head
 (412) 268-2599

Courses: **Software Engineering** 15-413 U P E Y
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: UNIX on VAX TOPS-20

Central Connecticut State University; School of Arts and Sciences;
 Department of Mathematics and Computer Science;
 New Britain, CT; 06050 United States

Degrees: BS

Contact: Prof. Leibowitz, A. Zoe
 Computer Science Area Coordinator
 (203) 827-7568 x7374

Courses: **Introduction to Computer Science** CS 271 U N X T
 Textbooks: *An Introduction to Programming and Problem Solving with Pascal*, Schneider
 Systems: Rainbow 100s

Advanced Programming Concepts CS 285 U P X T
 Textbooks: *Data Structures and Program Design*, Kruse, R.L.
 Systems: Rainbow 100s

Topics in Computer Science CS 290 U P X O
 Textbooks: *Beginning BASIC for the Commodore 64*, Mandell
 Systems: Commodore 64s

Data and File Structures CS 295 U P X TTextbooks: *Data Structure and Program Design*, Kruse, R.L.

Systems: VAX-8600

Computer Science Work Experience I CS 300 U N X O**Computer Science Work Experience II CS 301 U N X O****Introduction to Computer Organization and Programming CS 372 U P X T**Textbooks: *VAX-11 Programming*, Boase

Systems: VAX-8600

Numerical Methods CS 374 U P X Y**Independent Study in Computer Science CS 398 U P X D****Advanced Topics in Computer Science CS 407 U P X T****Introduction to Software Engineering CS 410 U P X Y**Textbooks: *Software Engineering with Ada Modular*, Weiner and Sincoure

Systems: VAX-8600

Computer Graphics: Presentations CS 423 U P X YTextbooks: *Computer Graphics*, Hearn, D. and Baker, M.P.

Systems: VAX-Regis

Operations Research in Computer Science CS 450 U P X YTextbooks: *Introduction to Operations Research Models*, Cooper, Leon et al.

Systems: VAX-8600

Introduction to Systems Programming CS 455 U P X TTextbooks: *Structured System Programming*, Walsh, J. and McKeog, M.

Systems: VAX-8600

Data Base Management Systems CS 460 U P X YTextbooks: *Data Bases Processing: Fundamentals, Modeling Applications*, Kroenke, D.

Systems: VAX-8600

Artificial Intelligence: Theory and Practice CS 462 U P X TTextbooks: *Artificial Intelligence*, Winston, Patrick H.

Systems: VAX-8600

Compiler Design CS 465 U P X TTextbooks: *Compiler Design Theory*, Lewis, Rosenkrantz, Stearns

Systems: VAX-8600

Simulation Techniques CS 473 U P X YTextbooks: *Systems Simulation*, Gordon, Geoffrey*Getting Started in GPSS*, Dunning, Kenneth

Systems: IBM-3084Q

Operating Systems Design CS 481 U P X YTextbooks: *An Introduction to Operating Systems*, Deitel, H.H.

Systems: VAX-8600

Minicomputers and Microprocessors CS 485 U P X YTextbooks: *Microcomputer Systems: The 8086/8088 Family-Architecture, Programming and Des*, Lin, Yu-Ching & Gibson, Glenn A.**Senior Project CS 498 U N X Y**

Additional Information:

Topics in Computer Science is offered irregularly.
 Computer Science Work Experience I and II are 6-month employment experience
 relevant to the computer science program.

City University of New York; The Graduate School and University Center;
 Ph.D. Program in Computer Science;
 New York, NY; 10036 United States

Degrees: PHD C

Contact: Prof. Beckman, F.S.
 Professor and Executive Officer
 (212) 790-4593

Courses: N X X

Clarkson University; School of Science;
 Department of Mathematics and Computer Science;
 Potsdam, NY; 13676 United States

Degrees: BS, MS, PHD

Contact: Dr. Fokas, A.S.
 Chairman
 (315) 268-2395

Courses: **Systems Programming** MA 443 U P E Y
 Textbooks: *Systems Programming*, Donovan
 Systems: Z-100 MS DOS
 Gould

Dec Pro
 IBM Mainframe

Software Design and Development MA 450 U N E Y
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: Z-100
 IBM main frame

Dec Pro
 Gould

Clemson University; College of Sciences;
 Department of Computer Science;
 Clemson, SC; 29634 United States

Degrees: BS CIS, BS, MS, PHD CS

Contact: Dr. Turner, A. J.
 Professor and Chairman
 (803) 656-5854

Courses: **Software Development Methodology** 472/672 B P B Y
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: IBM 3081K running MVS

Software Design and Programming Methodology 872 G P E Y
 Textbooks: *Software Specification Techniques*, Gehanti et al.

Software Verification, Validation, and Measurement 873 G P E B

Cleveland State University; James J. Nance College of Business Administration;
Department of Computer and Information Science;
Cleveland, OH; 44115 United States

Degrees: BS CIS, MS CIS

Contact: Prof. Heines, Thomas S.
Chairman
(216) 687-4760

Courses: **Structured Systems Analysis** CIS 433 U P E O
Textbooks: *Structured Analysis Methods for Computer Information Systems*, Teague and Pidgeon

Structured Systems Design CIS 434 U P E O
Textbooks: *The Practical Guide to Structured Systems Design*, Page-Jones
Systems: IBM 3081 IBM PC

Software Engineering CIS 620 G P R O
Textbooks: *The C Programming Language*, Kernighan and Ritchie
System 370 Job Control Language, Brown
Systems: IBM 3081 VAX 11/750

Systems Analysis and Design CIS 634 G P E O
Textbooks: *The Practical Guide to Structured Systems Design*, Page-Jones
Systems: IBM 3081 IBM PC

Additional Information:

Structured Systems Analysis and Structured Systems Design are offered
2-3 times per year. Software Engineering is offered 3 times per year.
System Analysis and Design is offered 2 times per year.

College of William and Mary; School of Arts and Sciences;
Department of Computer Science;
Williamsburg, VA; 23185 United States

Degrees: BS CS, MS CS, PHD CS

Contact: Prof. Noonan, Robert E.
Professor
(804) 253-4748

Courses: **Software Tools and Environment** CS 435, 535 B P E Y
Textbooks: *Software Tools*, Kernighan and Plauger
Systems: Prime 850 9955
9955 (PRIMOS)

Software Engineering CS 555 G P E O
Textbooks: *Software Engineering*, Pressman
Systems: Prime 850 9955
9955 (PRIMOS)

Human Factors CS 575 G P E B
Textbooks: *Human Factors*, Schneiderman
Systems: Prime 850 9955
9955 (PRIMOS)

Theory of Program Correctness CS 552 G P B OTextbooks: *The Science of Programming*, GriesSystems: Prime 850 9955
9955 (PRIMOS)**Program Testing** CS 605 G P E BSystems: Prime 850 9955
9955 (PRIMOS)**Additional Information:**

Software Engineering and Theory of Program Correctness are offered once every 3 semesters.

Columbia University; School of Engineering and Applied Sciences;
Department of Computer Science;
New York, NY; 10027 United States**Degrees:** BA, BS, MS, PHD**Contact:** Dr. Kaiser, Gail E.
Assistant Professor
(212) 280-3856**Courses:** **Software Design Laboratory** W3152 U P R Y
Systems: UNIX**Software Engineering** W4156 B P B Y**Programming Languages and Translators 1** W4115 B P R Y**Programming Environments and Software Tools** E6123 G P E X**Special Projects In Computer Science** W3998, W4995, others B N E D
Systems: UNIX Tops-20**Additional Information:**Programming Environments and Software Tools is a new course (Spring 87).
Various projects in software engineering and other areas can be negotiated between one or more students and a faculty member. Often the projects involve a small piece of a faculty member's research and may be supervised by a Ph.D. student.**Concordia University**; Faculty of Engineering and Computer Science;
Department of Computer Science;
Montreal, PQ; H3G 1M8 Canada**Degrees:** BCS, MCS, PHD, O**Contact:** Prof. Bui, T. D.
Chairman
(514) 848-3003**Courses:** **Software Engineering** COMP 354 U P R TTextbooks: *Software Engineering - A Practitioner's Approach*, Pressman

Systems: SUN Workstations VAX 750 (UNIX)

Additional Information:

A diploma in Computer Science is offered.

Cornell University; School of Engineering;
Department of Computer Science;
Ithaca, NY; 14853 United States

Degrees: ME, PHD

Contact: Prof. Van Loan, Charles
Director of Graduate Studies
(607) 255-8593

Courses: N X X

Dartmouth College; School of Arts and Sciences;
Program in Computer and Information Systems;
Hanover, NH; 03755 United States

Degrees: M

Contact: Prof. Kurtz, Thomas E.
Professor
(603) 646-3173

Courses: **Software Design and Development** CIS 122 G N R Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
The Practical Guide to Structured Systems Design, Page-Jones
Systems: PL1 Dartmouth Pascal

Additional Information:

I have found the Master File Update program to be an extraordinary rich medium, surprisingly so. We study: Structured design (Yourdon), Jackson design, Data hiding, Structure clashes, Testing strategies, Optimization, Complexity, and Errors with the MFU program is the example!

DePaul University; School of Liberal Arts and Sciences;
Department of Computer Science and Information Systems;
Chicago, IL; 60604 United States

Degrees: BS, MS

Contact: Dr. Epp, Helmut P.
Department Chair
(312) 341-8366

Courses: **Software Projects** 394 U P E A
Textbooks: *Managing the System Life Cycle*, Yourdon
Systems: IBM VAX
UNIX

Drexel University; College of Science;
Department of Mathematics and Computer Science;
Philadelphia, PA; 19104 United States

Degrees: BS CS, MS CS, PHD CS

Contact: Dr. Popyack, Jeffrey L.
Program coordinator for Computer Science
(215) 895-2668

Courses: **Software Engineering I** N677 U P R Y
Textbooks: *The Mythical Man Month*, Brooks, Frederick P., Jr.
Systems: Prime 9955

Software Engineering II N678 U P E Y
Systems: Prime 9955
Apple Machintosh

VAX 11/780
IBM PC-XT

Software Engineering I M745 G P E B
Systems: Prime 9955

Software Engineering II M746 G P E B
Systems: Prime 9955

Topics in Software Engineering M748 G P E X

East Tennessee State University; School of Applied Science and Technology;
Department of Computer and Information Sciences;
Programs in Computer Science and Information Science;
Johnson City, TN; 37614 United States

Degrees: BS, MS

Contact: Dr. Bailes, Gordon L.
Chairman
(615) 929-5332

Courses: **Software Engineering** 222-3250 U P R T
Textbooks: *Systems Analysis and Design Methods*, Whitten, Bentley, and Ho
Systems: IBM 4341 under CMS

Information Analysis 222-5200 G P B Y
Textbooks: *Software Engineering*, Shooman
Structured Systems Analysis: Tools and Techniques, Gane and Sarson
Systems: T.I. Business Pro (McAuto's Prokit Analyst) VAX/VMS
IBM 4341 under CMS

Systems Design 222-5300 G P B Y
Textbooks: *Software Engineering*, Shooman
Software Engineering with Ada, Booch
Systems: T.I. Business Pro (McAuto's Prokit Analyst) VAX/VMS
IBM 4341 under CMS

Florida Atlantic University; College of Business;
Department of Computer and Information Systems;
Boca Raton, FL; 33431 United States

Degrees: MCS, MS

Contact: Dr. Coulter, Neal S.
Director
(305) 393-3180

Courses: **Software Engineering** COP 6605 G N R O
Textbooks: *Software Engineering*, Fairley, Richard E.
Systems: IBM PC
Harris 800
VAX 11/780

Bell 3.2
Unival 1100/81

Additional Information:

Software Engineering is offered once or twice a year.

Incarnate Word College; Natural Sciences Division;
Minority Biomedical Research Group;
San Antonio, TX; 78209 United States

Contact: Sr. Fresquez, Catalina
Adviser
(512) 828-1261

Courses: N X X

Indiana University; School of Arts and Sciences;
Computer Science Department;
Bloomington, IN; 47405 United States

Degrees: BA, BS, MS, PHD

Contact: Prof. Robertson, Edward
Professor and Chair
(812) 335-4954

Courses: **Information Systems I** C445 B P O Y

Textbooks: *Software Configuration Management*, Babich, Wayne A.
Software Engineering: An Advanced Course, Bauer, F.L.
The Mythical Man-Month, Brooks, Frederick P., Jr.
Software Engineering Economics, Boehm, B.
Tools and Techniques for Structured Systems Analysis and Design, Davis, W.S.
Concise Notes on Software Engineering, DeMarco, Tom
Software Engineering Concepts, Fairley, Richard E.
Current Practices in Software Development, King, D.
Software Reliability, Kopetz
Managing a Programming Project, Metzger, P.W.
In Search of Excellence, Peters and Waterman
Software Psychology, Schneideman
Software Engineering: Design/Reliability/Management, Shooman, M.L.
Software Engineering, Sommerville, I.
The Psychology of Computer Programming, Weinberg, G.M.
Systems: VAX (VMS) Modula-2
Ingress

Information Systems II C446 B P O Y

Textbooks: *Software Configuration Management*, Babich, Wayne A.
Software Engineering: An Advanced Course, Bauer, F.L.
The Mythical Man-Month, Brooks, Frederick P., Jr.
Software Engineering Economics, Boehm, B.

Software Engineering Management C607 G P E Y

Textbooks: *Software Configuration Management*, Babich, Wayne A.
Software Engineering: An Advanced Course, Bauer, F.L.
The Mythical Man-Month, Brooks, Frederick P., Jr.
Software Engineering Economics, Boehm, B.
Tools and Techniques for Structured Systems Analysis and Design, Davis, W.S.
Concise Notes on Software Engineering, DeMarco, Tom
Software Engineering Concepts, Fairley, Richard E.
Current Practices in Software Development, King, D.
Software Reliability, Kopetz
Managing a Programming Project, Metzger, P.W.
In Search of Excellence, Peters and Waterman
Software Psychology, Schneiderman
Software Engineering: Design/Reliability/Management, Shooman, M.L.
Software Engineering, Sommerville, I.
The Psychology of Computer Programming, Weinberg, G.M.

Software Engineering Management C608 G P E Y

Textbooks: *Software Configuration Management*, Babich, Wayne A.
Software Engineering: An Advanced Course, Bauer, F.L.
The Mythical Man-Month, Brooks, Frederick P., Jr.
Software Engineering Economics, Boehm, B.
Tools and Techniques for Structured Systems Analysis and Design, Davis, W.S.
Concise Notes on Software Engineering, DeMarco, Tom
Software Engineering Concepts, Fairley, Richard E.
Current Practices in Software Development, King, D.
Software Reliability, Kopetz
Managing a Programming Project, Metzger, P.W.
In Search of Excellence, Peters and Waterman
Software Psychology, Schneiderman
Software Engineering: Design/Reliability/Management, Shooman, M.L.
Software Engineering, Sommerville, I.
The Psychology of Computer Programming, Weinberg, G.M.

Additional Information:

Information Systems I and II are one of several choices for BA/BS.
A "Professional Practice" course may satisfy BA/BS requirement with suitable project and paper, also "Individual Project".

Instituto Tecnologico y de Estudios Superiores de Monterrey;
 Graduated Program;
 Monterrey, N.L.; 64849 Mexico

Degrees: MS

Contact: Dr. Scheel, Carlos
 58-20-00 x161

Courses: **Software Engineering** CB-131 G P E Y
 Textbooks: *Software Tools (in Pascal)*, Kernigham and Plawger
 Software Engineering a Practitioners Approach, Pressman
 Systems: Apple IBM PC
 IBM 4381 Altos

Iona College; School of Arts and Science;
 Department of Computer and Information Sciences;
 Program in Computer Science;
 New Rochelle, NY; 10801 United States

Degrees: BA, BS, MS

Contact: Dr. Mallozzi, J.
 Chair of Department
 (914) 633-2578

Courses: **Software Engineering** CIS 390 U P E Y
 Systems: IBM Mainframe

Introduction to Software Engineering CIS 640 G P E Y
 Systems: IBM Mainframe

Iowa State University; School of Sciences and Humanities;
 Department of Computer Science;
 Program in Computer Science;
 Ames, IA; 50011 United States

Degrees: BS, MS, PHD

Contact: Prof. Oldehoeft, Arthur E.
 Acting Chair
 (515) 254-4377

Courses: **Software Engineering** CS 411 U N E O
 Textbooks: *Software Engineering*, Shooman, Martin L.
 Systems: HP 9050

Software Engineering CS 512 G N E Y
 Textbooks: *Ash Baker*
 Systems: Ash Baker

Additional Information:
 Software Engineering is offered twice a year.

Kent State University; School of Arts and Sciences;
Department of Mathematical Sciences;
Program in Mathematics/Computer Science;
Kent, OH; 44242 United States

Degrees: BS, MS, PHD

Contact: Prof. Rothstein, Michael
Asst. Professor
(216) 672-2430

Courses: **Software Engineering** 632511 G P E Y
Systems: UNIX VM/CMS
VMS

Software Engineering Projects 43107 U P E Y
Systems: UNIX

Lehigh University; College of Engineering and Physical Sciences;
Department of Computer Science and Electrical Engineering (CSEE);
Bethlehem, PA, 18105 United States

Degrees: BS CS, BS CE, MS CS

Contact: Dr. Varnerin, Lawrence
Department Chairman
(215) 758-4061

Courses: **Software Engineering** ECE 116 U P R Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Systems: CYBER 180 Model 850 DEC 20 Model 2065
Zenith Z-100 PC Series

Louisiana Tech University;
Department of Computer Science;
Ruston, LA; 71272 United States

Degrees: BS, MS

Contact: Prof. Schaar, Margaret
Professor
(318) 257-2298

Courses: **Structured Design** CS 260 U P R Y
Systems: IBM 370/158

Software Methodology CS 460 U N E Y
Textbooks: *Software Engineering*, Sommerville
Systems: IBM 370/158

System Design CS 540 G P E Y
Systems: IBM PC network

Additional Information:

We are currently revising our curriculum. Hence course numbers, names, etc. may change. Also, the IBM mainframe is to be upgraded.

Marquette University; College of Engineering;
 Department of Electrical Engineering and Computer Science;
 Program in Computer Science and Engineering;
 Milwaukee, WI; 53233 United States

Degrees: BS EE, MS EE, PHD EE

Contact: Dr. Niedejohn, Russell J.
 Professor
 (414) 224-1593

Courses: **Mini- and Microcomputers** EECS-190 B P B T

Textbooks: *Intel data books*

Systems: VAX crossassembler

several 8085 Intel systems

Software Engineering EECS-211 G N E X

Systems: VAX

Additional Information:

Other courses on Compilers, Advanced Software, Database, Operating Systems, Architecture.

Massachusetts Institute of Technology;
 Department of Electrical Engineering and Computer Science;
 Program in Computer Science;
 Cambridge, MA; 02139 United States

Degrees: BS, MS, PHD

Contact: Prof. Corbato, F. J.
 Associate Head for Computer Science and Engineering
 (617) 253-6001

Courses: **Structure and Interpretation of Computer Programs** 6.001 U N R T

Textbooks: *Structure and Interpretation of Computer Programs*, Abelson and Sussman

Systems: Scheme Language (a variant of Lisp) environment

Laboratory in Software Engineering 6.170 U P R T

Textbooks: *Abstraction and Specification in Program Development*, Liskov and Guttag

Systems: CLU language environment

Computer Language Engineering 6.035 U P O Y

Textbooks: *Compilers, Principles, Techniques and Tools*, Aho, A., et al.

Systems: LU language environment

Additional Information:

Computer Language Engineering is a member of a set of restricted electives, one of which is required.

McGill University; School of Computer Science;
 Montreal, PQ; H3A 2K6 Canada

Degrees: MS, PHD

Contact: Prof. Madhavji, Nazim H.
Professor
(514) 392-4847

Courses: **Advanced Topics (Software Engineering)** 308-762A G P E Y
Textbooks: *Software Engineering*, Sommerville, I.
Software Engineering with Modula-2 and Ada, Wiener and Sincovec
Software Development: A Rigorous Approach, Jones, C.B.
Software Engineering Environments, Hunke, H.
Systems: VAX 11/780 VAX 11/750
MASSCOMP computers

Advanced Topics (Programming Environments) 308-767B G P E Y
Textbooks: *Interactive Programming Environments*, Barstow, Shrobe, and Sandewall
Systems: VAX 11/780 VAX 11/750
MASSCOMP computers

Additional Information:

- 1) The School offers research study (M.Sc. and Ph.D.) in Software Engineering.
- 2) The School offers Software Engineering projects for Masters Applied students.

Michigan State University: College of Engineering;
Department of Computer Science;
Program in Computer Science;
East Lansing, MI; 48824 United States

Degrees: BS, MS, PHD

Contact: Prof. Forsyth, John J.
Associate Professor and Associate Chairperson
(317) 355-1646

Courses: **Design of Language Processors I** CPS 451 U P R O
Textbooks: *Compiler Construction: Theory and Practice*, Barrett and Couch
Software Engineering Concepts, Fairley, Richard E.
Systems: Control Data Cyber 750/175

Design of Language Processors II CPS 452 U P R O
Textbooks: *Compiler Construction: Theory and Practice*, Barrett and Couch
Software Engineering Concepts, Fairley, Richard E.
Systems: Control Data Cyber 750/175

Design of Language Processors III CPS 453 U P R O
Textbooks: *Compiler Construction: Theory and Practice*, Barrett and Couch
Software Engineering Concepts, Fairley, Richard E.
Systems: Control Data Cyber 750/175

Additional Information:

Full academic year sequence offered every year for Design of Language Processors I, II, and III.

Michigan Technological University: College of Sciences and Arts;
Department of Computer Science;
Houghton, MI; 49931 United States

Degrees: BS CS, MS CS

Contact: Prof. Ottenstein, Linda M.
Coordinator of Computer Science
(906) 487-2187

Courses: **Software Engineering** CS550 G P R Y
Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman
Systems: VAX 750 running Unix

Montclair State College: School of Mathematics and Computer Science;
Department of Mathematics and Computer Science;
Upper Montclair, NJ; 07043 United States

Degrees: BS, MA CS

Contact: Prof. Wolff, K.
Chairperson
(201) 893-5132

Courses: **Software Engineering and Reliability** Y0701 594 G P E B
Textbooks: *Software Reliability: Principles and Practice*, Meyers, G.
Software Engineering: A Practitioners Approach, Pressman, S.
Software Engineering: Reliability, Development and Management, Sherman, M.
Ethno Technical Review Handbook, Freedman, D.

Systems Software Y0701 384 U P E Y
Textbooks: *Systems Software*, Beck
Systems Programming, Donovan

National University: School of Computer Science and Information Systems;
San Diego, CA; 92108 United States

Degrees: MS SE

Contact: Prof. Sibley, Peter H.R.
Dean, School of Computer Science
(619) 563-7123

Courses: **Principles of Software Engineering and Introduction to the Mainframe Operation** CS 620 G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Introduction to the Application Programming Language - (Ada) CS 621A G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Advanced Application Programming CS 621B G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Advanced Software Engineering CS 622 G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Data Base Management I CS 623A G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Data Base Management II CS 623B G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Principles of Hardware and Software Integration CS 624 G N R X
Systems: IBM mainframe in a VM/CMS environment Ada

Expert Systems CS 625A G N R X	
Systems: IBM mainframe in a VM/CMS environment	Ada
 Verification and Validation Techniques CS 626 G N R X	
Systems: IBM mainframe in a VM/CMS environment	Ada
 Software Engineering Project I CS 627A G N R X	
Systems: IBM mainframe in a VM/CMS environment	Ada
 Software Engineering Project II CS 627B G N R X	
Systems: IBM mainframe in a VM/CMS environment	Ada
 Software Engineering Project III CS 627C G N R X	
Systems: IBM mainframe in a VM/CMS environment	Ada

New Mexico Institute of Mining and Technology;
 Department of Computer Science;
 Program in Computer Science;
 Socorro, NM; 87801 United States

Degrees: BS, MS, PHD

Contact: Prof. Taghva, Kazem
 Chairman
 (505) 835-5126

Courses: **Software Construction** CS328 U P E O
 Textbooks: *The Mythical Man-Month*, Brooks, Frederick P., Jr.
 Systems: VAX under UNIX

Design and Analysis of Software Systems CS528 G P E D

Additional Information:
 Software Construction is offered every 1 or 1 1/2 years.

New Mexico State University; School of Arts and Sciences;
 Department of Computer Science;
 Program in Computer Science;
 Las Cruces, NM; 88003 United States

Degrees: BS, MS, PHD

Contact: Prof. Gabrini, Philippe
 Department Head
 (505) 646-3723

Courses: **Algorithmic Computations** CS 271 U P R T
 Systems: Modula-2

Data Structures CS 272 U P R T
 Textbooks: *Data Structure using Modula-2*
 Systems: Modula-2

Program Development CS 371 U P R T
 Textbooks: *Software Engineering with Modula-2*
 Systems: Modula-2

North Carolina State University;

Department of Computer Science (Undergraduate);
 Program in Computer Studies (Graduate);
 Raleigh, NC; 27695 United States

Degrees: BS, MS, MCS

Contact: Dr. Chou, Wushow
 Director, Computer Studies Program
 (919) 737-2654

Courses: **Software Engineering** CSE 510 G P E Y

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Software Engineering, Shooman

Systems: IBM 4341 (VM/CMS) IBM 3081 (MVS/TSO)
 MicroVAX (ULTRIX) VAX 780 (UNIX)
 SAGE (UCSD p-system)

Software Engineering Project CSC 472 U P E Y

Textbooks: *Software Engineering*, Jensen and Tonies
 Systems: VAX 780 (UNIX) MicroVAX (ULTRIX)

North Dakota State University; School of Science and Mathematics;
 Department of Computer Science;
 Fargo, ND; 58105 United States

Degrees: BS, MS, PHD

Contact: Prof. Magel, Kenneth
 Director of Computer Science
 (701) 237-8189

Courses: **Software Development** 513 G P X Y

Textbooks: *Practical Guide to Software Engineering*, Pressman

Systems: VAX 11/780 running Berkeley UNIX 4.3 Zenith PCs running MS/DOS 3.1

Systems Analysis 213 U P X Y

Systems: IBM 3081 using CMS

Operating Systems Implementation 475 U P X O

Textbooks: *XINU*

Systems: VAX 11/780

Additional Information:

Operating Systems Implementation is offered twice a year.
 Every undergraduate takes at least four courses which require substantial projects. Every graduate student takes at least two courses which require substantial projects. Several courses at all levels devote 2-3 weeks each to software engineering methodologies, concepts, or practices.

Northeastern University; College of Computer Science;
 Boston, MA; 02115 United States

Degrees: BS, MS

Contact: Prof. Campagnoni, F. R.
Assistant Professor
(617) 437-3824

Courses: **Software Design and Development** COM1205 U P R O
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Software Tools in Pascal, Kernighan and Plauger
Systems: VAX 11/780
Local Area Networks
Apollo Workstations

IBM 4381
IBM PC
Pyramid 98X

Senior Project COM1600 U P E O
Textbooks: *Software Reliability*, Myers
Systems: DEC VAX
Local Area Networks
Apollo Workstations

IBM 4381
IBM PC
Pyramid 98X

Software Design and Development COM3205 G P R O
Textbooks: *Software Engineering*, Shooman
The Mythical Man Month, Brooks, Frederick P., Jr.
Systems: DEC VAX
Local Area Networks
Pyramid 98X

IBM 4381
Apollo Workstations
IBM PC

Additional Information:

Software Design and Development (Undergraduate), Senior Project, and Software Design and Development (Graduate) are offered twice per year.

Northrop University:

Department of Computer and Information Science;
Los Angeles, CA; 90045 United States

Degrees: BS CS, MS IS, MS CS

Contact: Dr. Teitell, Murray
Chairman
(213) 641-3470

Courses: **Software Engineering I** CS-475 U P E Y
Textbooks: *Software Engineering*

Software Engineering II CS-476 U P E Y

Advanced Software Design CS-477 U P E Y
Textbooks: *Structured Systems Analysis*, Gane and Sarson
Systems: IBM-PC with Graphics

Northwestern University: The Technological Institute;

Department of Industrial Engineering and Management Sciences;
Graduate Programs in Operations Research, Systems Engineering, and Applied Be;
Evanston, IL; 60201 United States

Degrees: BS, MS, PHD, MEM

Contact: Prof. Hurter, Arthur P.
Professor and Chairman
(312) 491-3383

Nova University: Center for Computer-Based Learning;
Department of Computer Science;
Program in Computer Science;
Ft. Lauderdale, FL; 33314 United States

Degrees: BS CS, MS CS, SCD CS

Contact: Dr. Simco, Edward R.
Director
(305) 475-7563

Courses: **Software Engineering** CIS 680 G N R O
Textbooks: *Software Engineering*, Jensen, R.W. and Tonies, C.C.
Research Directions in Software Technology, Wegner, P.
Systems: VAX 11/780 (UNIX/4.2 BSD)

Software Engineering Implementation CIS 682 G P E D
Textbooks: *Software Engineering*, Jensen, R.W. and Tonies, C.C.
Research Directions in Software Technology, Wegner, P.
Systems: VAX 11/780 (UNIX/4.2 BSD)

Software Engineering CIS 770 G P R Y
Systems: VAX 11/780 (UNIX/4.2 BSD)

Software Engineering Project CIS 870 G P R Y
Systems: VAX 11/780 (UNIX/4.2 BSD)

Additional Information:

Software Engineering is offered twice a year.

Ohio University: College of Engineering and Technology;
Department of Electrical and Computer Engineering;
Athens, OH; 45701 United States

Contact: Dr. Celenk, Mehmet
Assistant Professor
(614) 593-1567

Courses: **Digital Systems I** EE 461 B N X Y

Mini and Microcomputer Systems EE 467 B N X Y

Computer Architecture I EE 490 B N X Y

Digital Image Processing EE 690 G N X Y

Small Microprocessor Systems EE 408 B N X Y

Digital System II EE 462 B N X Y

Microcomputers II EE 468 B N X Y

Computer Architecture II EE 490 B N X Y

Advanced Topics-Microprocessor EE 609 G N X Y

Computer Vision EE 690 G N X Y

Digital System III EE 463 B N X Y

Distributed Computing Systems and Parallel Processing EE 490 B N X Y

16/32 Bit Microcomputer Architecture EE 690 G N X Y

Pattern Recognition EE 690 G N X Y

Oregon State University: School of Science;
Department of Computer Science;
Program in Computer Systems;
Corvallis, OR; 97331 United States

Degrees: BS, MS, PHD

Contact: Prof. Lewis, Ted
Professor
(503) 754-3273

Courses: **Software Design** CS 319 U P R T
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Systems: Macintosh IBM PC
UNIX (HP)

Software Systems: Methodology CS 561 G P R Y
Systems: Macintosh Pascal/C/Modula-2

Software Systems: Design CS 562 G P R Y
Systems: Macintosh Pascal/C/Modula-2

Polytechnic University, Brooklyn Campus: School of Engineering;
Department of Electrical Engineering and Computer Science;
Computer Science Division;
Brooklyn, NY; 11201 United States

Degrees: PHD CS, MS CS, MS IS, BS CS, BS EE

Contact: Prof. Shooman, Martin L.
Professor
(516) 454-5099

Courses: **Software Design and Engineering** CS306 U P E Y
Textbooks: *Software Engineering: Design, Reliability, and Management*, Shooman, Martin L.
Systems: Software Engineering Laboratory

Software Engineering I CS606 G P B O
Textbooks: *Software Engineering: Design, Reliability, and Management*, Shooman, Martin L.
Systems: Software Engineering Laboratory

Software Engineering II CS607 G P E B
Textbooks: *Software Engineering: Design, Reliability, and Management*, Shooman, Martin L.
Systems: Software Engineering Laboratory

Additional Information:

Formerly Polytechnic Institute of New York, Brooklyn Campus.
 The B.S. in E.E. is offered with Computer Engineering Option.
 Software Engineering I is offered two times per year.

Polytechnic University, Farmingdale Campus; School of Engineering;
 Department of Electrical Engineering and Computer Science;
 Computer Science Division;
 Farmingdale, NY; 11735 United States

Degrees: PHD CS, MS CS, MS IS, BS CS, BS EE

Contact: Prof. Shooman, Martin L.
 Professor
 (516) 454-5099

Courses: **Software Engineering I** CS606 G P B O
 Textbooks: *Software Engineering: Design, Reliability, and Management*, Shooman, Martin L.
 Systems: Software Engineering Laboratory

Software Engineering II CS607 G P E B
 Textbooks: *Software Engineering: Design, Reliability, and Management*, Shooman, Martin L.
 Systems: Software Engineering Laboratory

Additional Information:

Formerly Polytechnic Institute of New York, Farmingdale Campus.
 The B.S. in E.E. is offered with Computer Engineering Option.
 Software Engineering I is offered two times per year.

Polytechnic University, Westchester Campus; School of Engineering;
 Department of Electrical Engineering and Computer Science;
 Computer Science Division;
 White Plains, NY; 10605 United States

Degrees: PHD CS, MS CS, MS IS, BS CS, BS EE

Contact: Prof. Shooman, Martin L.
 Professor
 (516) 454-5099

Courses: **Software Engineering I** CS606 G P B Y
 Textbooks: *Software Engineering: Design, Reliability, and Management*, Shooman, Martin L.
 Systems: Software Engineering Laboratory

Additional Information:

Formerly Polytechnic Institute of New York, Westchester Campus.
 The B.S. in E.E. is offered with Computer Engineering Option.

Princeton University; School of Engineering and Applied Science;
 Department of Electrical Engineering;
 Princeton, NJ; 08544 United States

Degrees: BS E

Contact: Dr. Schwartz, Stuart C.
Chairman
(609) 452-3500

Courses: N X X

Additional Information:

A program of study in Computer Engineering is offered which includes courses in Software Engineering offered by the Department of Computer Science. Credit is offered for undergraduate independent project work in a wide range of areas including Software Engineering.

Purdue University (Entry 1): School of Science;
Department of Computer Science;
West Lafayette, IN; 47907 United States

Degrees: BS, MS, PHD

Contact: Dr. Dunsmore, H.E.
Associate Professor
(317) 494-1996

Courses: **Software Engineering** CS 404 U P E T
Textbooks: *Software Engineering*, Sommerville
Systems: DEC Vax 11/780 (UNIX OS)

Software Metrics CS 510 G P E Y
Textbooks: *Software Engineering Metrics and Models*, Conte, Dunsmore, and Shen
Systems: DEC Vax 11/780 (UNIX OS)

Systems Programming CS 403 U P R T
Textbooks: *Operating Systems Concepts*, Peterson
Systems: DEC Vax 11/780 (UNIX OS)

Programming Languages CS 565 G P R T
Textbooks: *Principles of Programming Languages*, Tennent
Systems: DEC Vax 11/780 (UNIX OS)

Information Systems CS 442 U P E T
Textbooks: *Management Information Systems: Conceptual Foundations, Structure, and Develo*, Davis and Olson
Systems: DEC Vax 11/780 (UNIX OS)

Purdue University (Entry 2): School of Industrial Engineering;
West Lafayette, IN; 47907 United States

Degrees: PHD, MS, MS IE, BS IE

Contact: Prof. Leimkuhler, Ferdinand F.
Professor and Head
(317) 494-5444

Courses: **Systems Analysis and Design I** IE 231 U P R O
Textbooks: *Elementary Computer Application*, Barrodale, Roberts, and Ehle
Systems: Vax 780 CDC 6600
Cyber 205 UNIX
ECN Network

Systems Analysis and Design IE 431 U P R O

Systems: UNIX

ECN Network

Programming Languages for Artificial Intelligence IE 547 B P E YTextbooks: *Lisp*, Winston*PROLOG*, Clocksin and Mellish

Systems: Franz Lisp

C-Prolog

Human-Computer Interaction IE 557 B P E Y

Systems: IBM PCs

DEC VAX

Cognitive Engineering of Interactive Software IE 559 B P E Y

Systems: IBM PCs

Computer-Aided Manufacturing I IE 575 B P E YTextbooks: *Computer Control of Manufacturing Systems*, Koren*An Introduction to Automated Process Planning Systems*, Chang and Wysk

Systems: UNIX

ECN Network

Micro Computers

Machine Controllers

Robot Controllers

Programmable Controllers

Systems Simulation IE 580 B P E OTextbooks: *Introduction to Simulation and SLAM II*, Pritsker

Systems: UNIX

ECN Network

Network Simulation Languages IE 640 G P E Y

Systems: UNIX

ECN Network

Advanced Simulation Design and Analysis IE 680 (CS 643) G P E YTextbooks: *Simulation Modeling and Analysis*, Avarill, Law, and Kelton

Systems: UNIX

ECN Network

Additional Information:

Systems Analysis and Design I, Systems Analysis and Design, and Systems Simulation are offered twice yearly.

Queen's University; Faculty of Arts and Science;

Department of Computing and Information Science;

Kingston, ON; K7L 3N6 Canada

Degrees: BS, MS

Contact: Dr. Lamb, David

Administrative Liaison for Software Engineering Institute Academic

Affiliate Program

(613) 545-6067

Courses: **Modules and Specifications** CISC-322 U P E Y

Software Engineering CISC-422/CISC-838 B P E Y

Textbooks: *Software Engineering*, Lamb, David

Systems: IBM 3081 running VM/CMS

Additional Information:

As a senior thesis, Computing majors take CISC-499, a course where (working by themselves, supervised by a faculty member) they complete a substantial programming project.

Rensselaer Polytechnic Institute (Entry 1); School of Science;
 Department of Computer Science;
 Troy, NY; 12180 United States

Degrees: BS, MS, PHD

Contact: Prof. Flaherty, Joseph E.
 Acting Chairman
 (518) 266-6348

Courses: **Systems Programming** 66.431 U P R T

Textbooks: *Assemblers, Compilers and Program Translation*, Calingaert, P.
Concurrent Euclid, The Unix System and Tunix, Holt, R.
The C Programming Language, Kernighan, B.W. and Ritchie, D.M.
Programming in Modula2, Wirth, N.

Systems: Sun2 workstations (4.2bsd UNIX) AT&T 3b2 PCs (System V UNIX)

Advanced Programming 66.609 G P E Y

Textbooks: *The Science of Programming*, Gries, D.

Design and Documentation U P R Y

Systems: UNIX WWB and PWB Modula2

Software Leadership B P X Y

Systems: Sun workstations UNIX tools
 various languages

Masters Project 66.698 G N R O

Additional Information:

Design and Documentation and Software Leadership are proposed as part of a revised curriculum.

Masters Project is a substantial software design and implementation project done under close faculty supervision. It has a schedule which is individually arranged.

Rensselaer Polytechnic Institute (Entry 2); School of Engineering;
 Department of Electrical, Computer and Systems Engineering;
 Troy, NY; 12180 United States

Degrees: BS, ME, MS, DENG, PHD EE, PHD CSE

Contact: Prof. Gerhardt, Lester A.
 Chairman
 (518) 266-6316

Courses: **Software Engineering I** 35.677 G P E Y

Textbooks: *Classics in Software Engineering*, Yourdon
Software Engineering: A Practitioner's Approach, Pressman

Software Engineering II 35.678 G P E Y

Textbooks: *Classics in Software Engineering*, Yourdon
Software Engineering: A Practitioner's Approach, Pressman

Rice University;
 Department of Electrical and Computer Engineering;
 Houston, TX; 77251 United States

Contact: Prof. North, David A.
Administrator
(713) 527-8101 x3599

Courses: N X X

Rochester Institute of Technology; School of Computer Science;
Graduate Department of Computer Science;
Rochester, NY; 14623 United States

Degrees: BS CS, MS CS

Contact: Dr. Anderson, Peter
Chairperson
(716) 475-2529

Courses: **Software Engineering I** ICSS-801 G N E T
Textbooks: *Software Engineering*, Shooman, M.L.

Software Engineering Laboratory ICSS-802 G P E Y
Textbooks: *Reference Manuals for Software Systems*
Systems: Vax/VMS

PYRAMID/UNIX

Additional Information:

An M.S. in Software Engineering program is planned to be offered beginning September 1987.

San Jose State University; School of Science;
Department of Mathematics and Computer Science;
Programs in Computer Science and Mathematics;
San Jose, CA; 95192 United States

Degrees: BA, BS, MA, MS

Contact: Prof. Phillips, Veril L.
Chairman
(408) 277-2411

Courses: **Advanced Programming** Math 146B U P B T
Textbooks: *Advanced Programming*, Schneider and Bruell

Graduate Seminar in Computer Science Math 295 G N R T

Additional Information:

Graduate Seminar in Computer Science is essentially a software project requirement, usually emphasizing software engineering principles.

Sangamon State University; School of Liberal Arts and Sciences;
Department of Mathematical Systems;
Springfield, IL; 62708 United States

Degrees: BA CS, MS M

Contact: Prof. Lasby, Gary
Convener
(217) 786-6770

Courses: Introduction to Software Engineering MSY 478 U P E Y

Software Engineering MSY 578 G P E Y

Additional Information:

Concepts of software engineering as embodied in good programming styles are stressed in all our courses.

Seattle University; School of Science and Engineering;
Department of Software Engineering/Computer Science;
Program in Software Engineering;
Seattle, WA; 98122 United States

Degrees: MSE

Contact: Dr. Mills, Everaldo
Director
(206) 626-5464

Courses: Information Structures and Algorithms ESW 500 G N O Y

Textbooks: *Data Structures and Algorithms*, Aho, Hopcroft and Ullman

Systems: HP 3000 VAX 11-750
PCs

Computer Systems Principles ESW 501 G N O Y

Textbooks: *Computer Programming and Architecture: The VAX 11*, Levy

Systems: HP 3000 VAX 11-750
PCs

Technical Communication ESW 508 G N R Y

Textbooks: *The Elements of Style*, Strunk and White

Systems: HP 3000 VAX 11-750
PCs

Software Systems Analysis ESW 510 G P R Y

Textbooks: *Structured Analysis and Systems Specification*, DeMarco
Essential Systems Analysis, Menomin and Palmer

Systems: HP 3000 VAX 11-750
PCs

System Design Methodology ESW 512 G P R Y

Textbooks: *The Practical Guide to Structured Systems Design*, Page-Jones, Meilir

Systems: HP 3000 VAX 11-750
PCs

Programming Methodology ESW 514 G P R Y

Textbooks: *Writing Efficient Programs*, Bently, J.

Systems: HP 3000 VAX 11-750
PCs

Software Quality Assurance ESW 516 G P R Y

Textbooks: *Software Reliability Guidebook*, Glass, R.

Systems: HP 3000 VAX 11-750
PCs

Software Metrics ESW 518 G P R Y

Textbooks: *Software Engineering Economics*, Boehm

Systems: VAX 11-750 PCs

Software Project Management ESW 531 G P R Y

Systems: HP 3000
PCs

VAX 11-750

System Procurement and Contract Acquisition ESW 533 G P E Y

Textbooks: *Data Processing Contracts*, Brandon and Segelstein

Systems: HP 3000
PCs

VAX 11-750

Database Systems ESW 541 G P E Y

Textbooks: *Database Processing*, Kroenke

Systems: VAX 11-750

Formal Methods ESW 543 G P R Y

Textbooks: *Structured Programming: Theory and Practice*, Linger, Mills and Witt

Systems: HP 3000
PCs

VAX 11-750

Distributed Computing ESW 551 G P E Y

Textbooks: *Distributed Systems Architecture and Implementation*, Lampson et al.

Systems: HP 3000
PCs

VAX 11-750

Artificial Intelligence ESW 553 G P E Y

Textbooks: *Artificial Intelligence*, Rich, Elaine

Systems: HP 3000
PCs

VAX 11-750

Human Factors in Computing ESW 560 G P E Y

Textbooks: *Software Psychology*, Schneiderman

Systems: HP 3000
PCs

VAX 11-750

Data Security and Privacy ESW 562 G P E Y

Textbooks: *Security, Accuracy and Privacy in Computer Systems*, Martin

Systems: HP 3000
PCs

VAX 11-750

Computer Graphics ESW 564 G P E Y

Textbooks: *Computer Graphics: A Programming Approach*, Harrington

Systems: HP 3000
PCs

VAX 11-750

Real Time Systems ESW 566 G P E Y

Textbooks: *Structured Development for Real-Time Systems*, Ward and Mellor

Systems: VAX

PCs

Software Engineering Project I ESW 585 G P R Y**Software Engineering Project II** ESW 586 G P R Y**Software Engineering Project III** ESW 587 G P R Y**Special Topics** ESW 591 G N E D**Special Topics** ESW 592 G N E D**Special Topics** ESW 593 G N E D

Independent Study ESW 596 G N E D

Independent Study ESW 597 G N E D

Independent Study ESW 598 G N E D

Additional Information:

Information Structures and Algorithms and Computer Systems Principles are required entry background, not for degree credit.

Shippensburg University; School of Arts and Sciences;
Department of Mathematics and Computer Science;
Program in Computer Science;
Shippensburg, PA; 17257 United States

Degrees: BS CS

Contact: Dr. Bell, Howard
Department Chairman
(717) 532-1431

Courses: **Software Design for Information Systems** CPS305 U P E Y
Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman
Systems: UniVac 90 series

Research In Computer Science CPS405 U N E O

Additional Information:

Research in Computer Science is offered once or twice a year.

Southern Illinois University Edwardsville; School of Sciences;
Department of Computer Science;
Edwardsville, IL; 62026 United States

Degrees: BA, BS CS

Contact: Dr. Hattemer, J. R.
Acting Chair
(618) 692-2386

Courses: **Software Design and Development** CS 424 U P E Y
Textbooks: *Software Design and Development*, Gilbert, Philip

Topics In Software Engineering CS 524 G N E O

Additional Information:

Topics in Software Engineering is offered occasionally.

Southwest Texas State University; School of Science;
Department of Computer Science;
San Marcos, TX; 78666 United States

Degrees: BA, BS, MA, MS, BED

Contact: Dr. Early, Grady MED
(512) 245-3409

Courses: **Software Engineering** CS 3398 U P E Y
Textbooks: *Software Engineering*, Sommerville
Systems: VAX 8600

VMS

Advanced Software Engineering (Proposed) CS 5398 G P E Y
Systems: VAX 8600

VMS

Stanford University (Entry 1); School of Engineering;
 Department of Computer Science;
 Stanford, CA; 94305 United States

Degrees: BS CS, BS CSE, MS, MS AI, PHD

Contact: Prof. Reges, Stuart
 Assistant Chairman for Education
 (415) 723-9798

Courses: **Introduction to Software Engineering** CS106A U N B T
Textbooks: *Building Pascal Programs*, Reges, Stuart
Systems: DEC System-20

Introduction to Software Engineering (continuation) CS106B U P B T
Textbooks: *Intermediate Problem Solving and Data Structures*, Helman and Veroff
Systems: DEC System-20

Object-Oriented Design with Ada CS149 B P E Y
Textbooks: *Software Engineering with Ada*, Booch, Grady
Systems: VAX 8650

Software Engineering Laboratory CS247 B P E Y
Systems: microcomputer (varies)

Stanford University (Entry 2); Terman Engineering Center;
 Department of Engineering-Economic Systems;
 Stanford, CA; 94305 United States

Contact: Prof. Luenberger, David G.
 Chairman
 (415) 723-4168

Courses: N X X

State University of New York; Watson School of Engineering, Applied Science, and Technology;
 Department of Computer Science;
 Binghamton, NY; 13901 United States

Degrees: MS AT

Contact: Dr. Piatkowski, Thomas F.
 Department Chairman
 (607) 777-4802

Courses: **Software Engineering I** CS-322 G P E Y
Systems: DEC-Ada on VAX 11/780 and 8650

Software Engineering II CS 323 X G P E Y
 Systems: DEC-Ada on VAX 11/780 and 8650

Additional Information:

Miscellaneous software engineering projects have and will be undertaken. For example, a group study produced a lengthy report on how to implement a Masters degree in "Software and Computer Systems Engineering". Future projects will involve major studies of software methodologies, software metrics, software design as well as the design and implementation of large software projects.

State University of New York at Stony Brook; College of Engineering and Applied Science;
 Department of Computer Science;
 Stony Brook, NY; 11733 United States

Degrees: BS, MS, PHD

Contact: Dr. Henderson, Peter
 Graduate Program Director
 (516) 246-7647

Courses: **Techniques of Software Design** CSE-520 G P R Y
 Systems: VAX 750's
 SUN Workstations

UNIX 4.3bsd

Software Engineering CSE-300 U P E Y
 Systems: VAX 750's

UNIX 4.2bsd

Stephen F. Austin University; School of Business Administration;
 Department of Computer Science;
 Nacogdoches, TX; 75962 United States

Degrees: MS CS

Contact: Dr. Wood, Craig A.
 Chairman
 (409) 568-2508

Courses: **Software Development Principles** 513 G N E B

Software Development Applications 525 G P E B

Syracuse University; College of Engineering;
 Department of Electrical and Computer Engineering;
 Program in Computer Engineering;
 Syracuse, NY; 13244 United States

Degrees: BS, MS, PHD

Contact: Dr. Balabanian, Normal
 Chairman of the Department
 (315) 423-2656

Temple University; School of Computer Science and Engineering;
 Department of Computer and Information Sciences;
 Programs in Computer Science and Information Science;
 Philadelphia, PA; 19122 United States

Degrees: BA, BBA, MA, MS BA, PHD, PHD BA

Contact: Ms. Shteir, Laurie
 (215) 787-8450

Courses: **Data Structures and Algorithms** 223 U P R T

Textbooks: *Data Structures, Algorithms, Program Style*, Korsh, James
 Systems: CDC Cyber (750)

Compiler Design 324 U P E Y

Textbooks: *Assemblers, Compilers and Program Translation*, Calingaert, Peter
Algorithms + Data Structures = Programs, Wirth, N.
 Systems: Cyber 750

Topics In High Order Languages and Translation 665 G P E X

Textbooks: *Lecture Notes in Computer Science*, Goos, G. and Hartmanis, J.

Theorem Proving and Program Verification 675 G P E X

Textbooks: *The Design of Well-Structured and Correct Programs*, Alagic, Saud and Arbib, Michael
An Introduction to the General Theory of Algorithms, Machtey, M. and Young, P.

Knowledge Based Systems 682 G P E X

Textbooks: *Programming in Prolog*
Expert Systems, Concepts and Examples, Alty and Coombs
 Systems: OPS5 PROLOG

Software Engineering 690 G N E X

Textbooks: *Handbook of Software Engineering*, Vick, C.R. and Vamamoorthy, C.
Software Engineering, Sommerville, I.
 Systems: VMS OPS5
 Pascal

COBOL Information Retrieval and File Management 153 U P R T

Textbooks: *Data Management and File Processing*, Loomis, Mary
Advanced Structured COBOL, Welburn
 Systems: IBM 4381

Information Systems Analysis and Design 201 U P R T

Textbooks: *Elements of Systems Analysis*, Gorc and Stubbe

Project In Information Science 301 U P R T

Systems: PCs AT&T 3B2

Data Management Systems 330 U P R T

Textbooks: *Data Base Management*, McFadden, F.R. and Hoffer, J.A.
 Systems: AT&T 3B2

Software Design 338 U P E Y

Textbooks: *Software Engineering: A Practitioner's Approach*, Pressmand and Roger
Structure Design, Yourdon and Constantine
Reliable Software thru Composite Design, Myers
 Systems: IBM 4381 PCs

Additional Information:

Business Administration programs with concentration in Computer and Information Science.

Texas Christian University; AddRan College;
Computer Science Department;
Ft. Worth, TX; 76129 United States

Degrees: MSDD

Contact: Dr. Comer, James R.
Chairman
(817) 921-7166

Courses: Introduction to Software Design and Development SDD 5143 G N R Y
Textbooks: *Software Engineering: A Practitioner Approach*, Pressman, R.

Ada Design and Development SDD 6013 G P E D
Textbooks: *Software Engineering with Ada*, Booch
Systems: VAX 11/780

Advanced Topics In Systems Software SDD 6023 G P E D
Systems: VAX 11/780

Additional Information:

Programming Structures is a leveling course.

The Claremont Graduate School;
Department of Information Science;
Program in Information Science;
Claremont, CA; 91711 United States

Degrees: MS MIS, MS CIS, PHD

Contact: Prof. Gray, Paul
Chair
(714) 621-8209

Courses: Information Systems-Analysis and Design IS 305 G N R Y
Textbooks: *Structured Analysis Methods for Computer Information Systems*, Teague, Lavette C. and Pidgeon, Christopher
Systems: VAX 11/785

Systems Planning IS 328 G P R Y
Textbooks: *Structured Analysis and Systems Specification*, DeMarco, Tom
Tutorial On Software Design Techniques, Freeman and Wasseman
Systems: VAX 11/785

Large Scale Software Development IS 362 G N R Y
Textbooks: *Concise Notes on Software Engineering*, DeMarco, Tom
Systems: VAX 11/795

Additional Information:

We follow the Communications of the ACM, Nov. 1982 program for MS degrees in information systems.

The George Washington University; School of Engineering and Applied Science;
Department of Electrical Engineering and Computer Science;
Washington, DC; 20052 United States

Degrees: BS CS, MS CS, SCD

Contact: Prof. Lang, R.
Chairman
(202) 676-6083

Courses: **System Software and Software Engineering** C.Sci. 151 U P R O
Systems: IBM 4341 ATT 803

Additional Information:
System Software and Software Engineering is offered Fall Day and Evening.

The Hartford Graduate Center; School of Engineering and Science;
Department of Computer and Information Science;
Program in Computer and Information Science;
Hartford, CT; 06120 United States

Degrees: MCS

Contact: Dr. Danchak, Michael
Dean of the School of Engineering and Science
(203) 548-2450

Courses: **Software Engineering I** 35677 G P B T
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Systems: Sun/3 workstations (33) UNIX VAX-11/750 BSD4.3 with NFS
Apollo DOMAIN/IX workstations (12) AT&T PC6300s

Software Engineering II 35678 G P E Y
Textbooks: *A Practical Handbook For Software Development*, Birrell and Ould
Systems: Sun/3 workstations (33) UNIX VAX-11/750 BSD4.3 with NFS
Apollo DOMAIN/IX workstations (12) AT&T PC6300s

Software Project Management 66696 G P E B
Textbooks: *Software Engineering Economics*, Boehm, Barry
The Software Development Project, Bruce and Pederson
IEEE Tutorial: Software Management

The Pennsylvania State University; College of Science;
Department of Computer Science;
University Park, PA; 16802 United States

Degrees: B, M, PHD

Contact: Dr. Lambert, Joseph M.
Department Head
(814) 865-9505

Courses: **Science of Computer Programming** 520 G N E Y
Systems: IBM 3090 VM/CMS

Compiler Construction 521 G P E Y
Systems: IBM 3090 VM/CMS

Semantics of Programming Languages 522 G P E B

Systems: IBM 3090

VM/CMS

Design and Specification of Distributed Systems 524 G P E B

Systems: IBM 3090

VM/CMS

The University of Alberta;

Department of Computing Science;

Edmonton, AB; T6G 2H1 Canada

Degrees: BS, MS, PHD

Contact: Prof. White, Lee J.

Chairman

(403) 432-4589

Courses: Software Engineering CMPUT 401 U P R T

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

Systems: Mainframe-Amdahl 5870, Running MTS Operating System, Macintosh Microcomputer

Interactive Programming Environments CMPUT 652 G P E B

Textbooks: *Interactive Programming Environments*, Barstow, Shroke, and Sandewall

Systems: VAX-Systems, UNIX Operating System

Software Testing CMPUT 501 G P E B

Textbooks: *Computer Program Testing*, Chandrasekaran and Radicci

Software Testing Techniques, Belzer

Systems: VAX Systems, UNIX Operation System

The University of Texas at Arlington; School of Engineering;

Department of Computer Science Engineering (CSE);

Arlington, TX; 76019 United States

Degrees: BS CSE, MS CSE, PHD CSE

Contact: Prof. Grabow, Paul C.

Assistant Professor

(817) 273-2348

Courses: Methods In Software Engineering CSE 4310 U P E B

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

The Mythical Man Month, Brooks, Frederick P., Jr.

Systems: DEC VAX-11/780 (VMS)

DEC-2060

Software Engineering CS 5324 G P R O

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

Systems: DEC VAX-11/780 under VMS

Advanced Software Engineering CS 6324 G P E Y

Systems: DEC VAX-11/780 under VMS

Additional Information:

Software Engineering is offered once in Spring and once in Summer.

The University of Texas at Dallas: School of Natural Sciences and Mathematics;
Program in Computer Science;
Richardson, TX; 75083 United States

Degrees: BS, MS, PHD

Contact: Dr. Ntalos, Simeon
Associate Professor and Program Head
(214) 690-2181

Courses: **Software Engineering** CS 6354 G N E Y
Textbooks: *Software Engineering*, Sommerville, I.

Software Validation, Verification, and Performance Measurement CS 6367 G P E O

Additional Information:

Software Validation, Verification, and Performance Measurement is offered twice every three years.

The University of Texas at San Antonio: College of Science and Engineering;
Division of Mathematics, Computer Science and Systems Design;
Program in Computer Science;
San Antonio, TX; 78285 United States

Degrees: BS, MS

Contact: Dr. Hanavan, E. Patrick, Jr.
(512) 691-4452

Courses: **Programming Methodology** CS 3773 U P R O
Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman
Automated Data Systems Documentation Standards
Elements of Programming Style, Kernighan and Plauger
Systems: VAX 11/780 w/VMS IBM 4381 w/CMS

Software Design CS 5103 G P E O
Textbooks: *The Program Development Process Part II: The Programming Team*, Aron
Systems: IBM 4381 w/CMS

Software Configuration Management CS 5143 G P E O
Textbooks: *Software Configuration Management*, Bersoff

Software Testing CS 5133 G P E O
Textbooks: *The Art of Software Testing*, Myers
Systems: VAX 11/780 w/VMS

Additional Information:

Programming Methodology is offered in Fall and Spring semesters. Software Design, Software Configuration Management, and Software Testing are offered together in regular semester rotation.
The graduate courses (5103, 5133, 5143) comprise a depth area of study for graduate students, who must develop at least three such areas in their course of study.

Union College: School of Computer Science;
Department of Electrical Engineering and Computer Science;
Schenectady, NY; 12308 United States

Degrees: BS, MS

Contact: Prof. Hannay, David
Co-chair EE/CS Dept.
(518) 370-6270

Courses: **Software Engineering** CSC-260 U P X Y
Textbooks: *Classics in Software Engineering*, Yourdon, E.N.
The C Primer
Systems: VAX

United States Air Force Academy:

Department of Computer Science;
Program in Computer Science;
USAFA, CO; 80840 United States

Degrees: BS CS

Contact: Major Richardson, William E.
Deputy for Computer Science
(303) 472-3590

Courses: **Systems Analysis and Design I** Comp Sci 453 U P R Y
Systems: Z-248 (Zenith) MV-10000 (Data General)
Vax11/780 (DEC) Vax8650 (DEC)

Systems Analysis and Design II Comp Sci 454 U P R Y
Systems: Z-248 (Zenith) MV-10000 (Data General)
Vax11/780 (DEC) Vax8650 (DEC)

University of Alabama at Birmingham: School of Natural Sciences and Mathematics;
Department of Computer and Information Sciences;
Birmingham, AL; 35294 United States

Degrees: BS, MS, PHD

Contact: Dr. Jones, Warren T.
Professor and Chairman
(205) 934-2213

Courses: **Introduction to Systems Analysis** CS 425 B P E O
Textbooks: *Introduction to Systems Analysis*, Gane, C. and Sarson, T.

Formal Specifications and Software Development CS 520 G N R Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

Software Design Methodology CS 524 G P E B

Additional Information:

Multiple offerings for Introduction to Systems Analysis per year (up to 3 per year).
Some Software Engineering content or purpose in other courses, especially:
CS 522 Formal Semantics of Programming Languages (Pagan, F. Formal Specifications of Programming Languages, Prentice-Hall, 1981)
CS 526 Program Verification (Manna's Mathematical Theory of Computation)
CS 531 Computer Design (Hwang and Briggs, Computer Architecture and Parallel Processing)

CS 535 Computer Communications Network (Schwartz, M. Computer Communication Network Design and Analysis)
 CS 538 Performance Evaluation (Kobayashi. Modeling and Analysis)
 All of these courses are electives.

University of Alabama In Huntsville; School of Mathematics and Natural Sciences;
 Computer Science Department;
 Huntsville, AL; 35899 United States

Degrees: MS, PHD

Contact: Dr. Shiva, S. G.
 Chairman
 (215) 895-6088

Courses: **Software Engineering** CS 650 G N E Y
 Textbooks: *Software Engineering*, Jensen and Tonies

Advanced Software Engineering CS 750 G P E D
 Textbooks: *Software Engineering*, Shooman, M.

University of Alaska; College of Liberal Arts;
 Department of Mathematical Sciences;
 Program in Computer Science;
 Fairbanks, AK; 99775 United States

Degrees: BS

Contact: Prof. Gatterdam, R.W.
 Professor of Computer Science
 (907) 474-6174

Courses: **Software Engineering** CS 401 U P E Y
 Textbooks: *Concise Notes on Software Engineering*, DeMarco, Tom
Guide to Effective Software Technical Writing, Browning, Christine
The Mythical Man Month, Brooks, Frederick P., Jr.

University of Arizona; College of Arts and Sciences;
 Department of Computer Science;
 Tucson, AZ; 85721 United States

Degrees: MS CS, PHD CS

Contact: Prof. Andrews, Gregory R.
 Acting Department Head
 (602) 621-6613

Courses: **Software Tools** Computer Science 430 G P R T
 Textbooks: *The C Programming Language*, Kernighan and Ritchie
The Elements of Programming Style, Kernighan and Plauger
Writing Efficient Programs, Bentley
The Unix Programming Environment, Kernighan and Pike
Introducing the Unix System, McGilton and Morgan
 Systems: VAX 11/785 under UNIX 4.3bsd

Translators and Systems Software Computer Science 453 G P E O
Systems: VAX 11/785 under UNIX 4.3bsd

Advanced Topics in Software Systems Computer Science 630 G N E D
Systems: VAX 11/785 under UNIX 4.3bsd

Additional Information:

Translators and Systems Software is offered in the Spring semester.

University of Arkansas; Fulbright College of Arts and Sciences;
Department of Computer Science;
Fayetteville, AR; 72701 United States

Degrees: BS, MS

Contact: Prof. Starling, Greg
Professor
(501) 575-6427

Courses: **Software Design and Development** 4833 U N E Y
Textbooks: *Tutorial: Software Design Strategies*
Systems: IBM VM/CMS

PC MS DOS

University of California, Berkeley; College of Engineering;
Department of Electrical Engineering and Computer Science;
Program in Computer Science;
Berkeley, CA; 94720 United States

Degrees: BEECS, MS, ME, PHD, DENG

Contact: Mrs. Webster, Betty
CS Scheduling Assistant
(415) 643-6130

Courses: **Introduction to Computer Science** CS60C U P R O
Textbooks: *Oh! Pascal!*, Cooper and Clancy
Lisp Craft, Wilensky
Systems: Pascal

Lisp

Data Structures and Advanced Programming CS160 U P R O
Textbooks: *Data Structures and Program Design*, Kruse
Advanced Programming and Problem Solving with Pascal, Schneider
Systems: Pascal

Additional Information:

Introduction to Computer Science is offered in the Fall and Spring. Data
Structures and Advanced Programming is offered in the Fall, Spring, and Summer

University of California, Irvine;
Department of Information and Computer Science;
Program in Computer Science;
Irvine, CA; 92717 United States

Degrees: BS, MS, PHD

Contact: Prof. Freeman, Peter
Associate Professor
(714) 856-7403

Courses: **Project in System Design** ICS 195 U N O T
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Systems: VAX UNIX SUN UNIX

Software Engineering A 245A G N X Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Systems: VAX UNIX SUN UNIX

Software Engineering B 245B G N X Y
Textbooks: *Tutorial: Software Testing and Validation Techniques*, Miller, Edward and Howden, W.

Additional Information:

Project in System Design is an option to fulfill project requirement for B.S.

University of Central Florida (Entry 1);
Department of Computer Engineering (CEBA 207);
Program in Computer Engineering;
Orlando, FL; 32816 United States

Degrees: BS E, MS, MS E, PHD

Contact: Dr. Linton, Darrell G.
Associate Professor of Engineering
(305) 275-2236

Courses: **Software Engineering I** ECM 5806 B P B Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Ada: An Introduction, Saib, S.
Systems: IBM 4381 (Telesoft Ada compiler) VAX 11/750 (Ada compiler)
Gould 32/6780 (ISCS Ada translator)

Software Engineering II ECM 6807 G P E Y
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Ada: An Introduction, Saib, S.
Systems: IBM 4381 (Telesoft Ada compiler) VAX 11/750 (Ada compiler)
Gould 32/6780 (ISCS Ada translator)

University of Central Florida (Entry 2): College of Arts and Sciences;
Department of Computer Science;
Orlando, FL; 32816 United States

Degrees: MS CS, PHD CS

Contact: Prof. Cottrell, Larry K.
Graduate Program Coordinator
(305) 275-2341

Courses: **Software Engineering** COP 5632 G N E X
Software Tools COP 5682 G P E X

Additional Information:

A student's plan of study can be designated to emphasize any number of areas within Computer Science. Some sample plans of study are Architecture Emphasis, Operating Systems Emphasis, Artificial Intelligence Emphasis, Data Base Management Emphasis, and Software Tools Emphasis. These do not include all areas of emphasis, but show the flexibility of the Master of Science Program.

University of Colorado at Colorado Springs; School of Engineering and Applied Science;
Department of Computer Science;
Colorado Springs, CO; 80933 United States

Degrees: BS, MS

Contact: Dr. Sebesta, Robert W.
Chair
(303) 593-3325

Courses: **Introduction to Software Engineering** CS 330 U N R T
Textbooks: *Software Engineering with Ada and Modula-2*, Wiener
Systems: MicroVAX

Systems Engineering Management CS 435/535 B N E A

Software Engineering Laboratory CS 436/536 B P E A

Software Specification and Requirements Analysis CS 531 G N E A

Software Design CS 532 G N E A

Software Testing CS 533 G N E A

Software Maintenance CS 534 G N E A

Topics and Readings in Software Engineering CS 630 G N E D

Additional Information:

Software Engineering Laboratory with 7 MicroVAX computers, 2 VAX stations,
1 Sun and a Gould System.

University of Delaware: College of Arts and Science;
Department of Computer and Information Sciences;
Newark, DE; 19716 United States

Degrees: BA, BS, MS, PHD

Contact: Prof. Bell, Eugene J.
Assistant Professor
(302) 451-1957

Courses: **Advanced Topics: Software Engineering** CIS 879 G N E O
Systems: VAX UNIX Modula 2
C

Additional Information:

Advanced Topics: Software Engineering 1st offered Fall 1986.

University of Denver;
 Department of Mathematics and Computer Science;
 Denver, CO; 80208 United States

Degrees: MS, PHD

Contact: Prof. Dom, William S.
 Chairman
 (303) 871-3293

Courses: **Software Design Techniques** COMP 4380 G P R O
 Systems: VAX 11/750 UNIX 4.2

Additional Information:
 Software Design Techniques is offered twice a year.

University of Evansville; School of Engineering and Computer Science;
 Department of Computing Science;
 Evansville, IN; 47714 United States

Degrees: BA, BS, MS CSED, MS MIS

Contact: Dr. Mitchell, William
 (812) 479-2650

Courses: **Software Engineering** CS 325 U P R O
Software Engineering Project CS 494/495/497 U P R T
Software Engineering CS 521 G N B O
 Textbooks: *Software Engineering*, Shooman and Martin

Additional Information:
 Software Engineering (Undergraduate) and Software Engineering (Graduate) are
 offered 2 times/year.

University of Houston - Clear Lake; School of Sciences and Technologies;
 Department of Technologies;
 Houston, TX; 77058 United States

Degrees: BS CS, MS CS, BA CIS, MA CIS

Contact: Dr. Collins, George C.
 Director, Programs in Technologies
 (713) 488-9386

Courses: **Ada Programming Language** CSCI 3432 U P R T
 Textbooks: *Ada as a Second Language*, Cohen
Reference Manual for the Ada Programming Language, US Government (ANSI/MIL-STD-1815A-1983)
 Systems: VAX 11/785

Topic: **Software Engineering Methodology** CSCI 4931 U P E Y
 Textbooks: *Software Engineering*, Sommerville
Software Engineering, Vick and Ramamborthy

Topic: Software Engineering Tools and Environments CSCI 5931 G P E Y
Systems: ALS AIE
 Rational

Additional Information:

UH-CL has a strong emphasis on the engineering of computer automated systems which includes the integration and trade-off studies of issues involving software, hardware, and people. Therefore several research projects and theses have a strong component of software engineering. In addition two system-level courses offered annually which contain such a component are Computer Automated Systems (CTEC 4532) and Synthesis of Computer Networks (CTEC 6532).

University of Idaho: College of Engineering;
 Department of Computer Science;
 Programs in Scientific Computing and Data Processing;
 Moscow, ID; 83843 United States

Degrees: BS CS, MS CS

Contact: Dr. Dickinson, John
 Chairman
 (208) 885-6589

Courses: CS Design I CS 480 U N R T

Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman, Roger

Systems: VAX 11/780	IBM 4381
HP 9000	HP 9836
IBM PC	Pascal
COBOL	FORTRAN
Lisp	R-BASE
D-BASE	

CS Design II CS 481 U N R T

Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman, Roger

Systems: VAX 11/780	IBM 4381
HP 9000	HP 9836
IBM PC	Pascal
COBOL	FORTRAN
Lisp	R-BASE
D-BASE	

Software Engineering CS 410/510 B N E Y

Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman, Roger

Model for Software Project Management CS 511 G P E Y

Textbooks: *Software Engineering Metrics and Models*, Conte, Dunsmore, and Shen

Additional Information:

CS Design I is an individual project with full documentation. CS Design II is team project with full documentation.
 Software Engineering and Model for Software Project Management are available on video tape.

University of Illinois at Chicago: College of Engineering;
 Department of Electrical Engineering and Computer Science (M/C 154);
 Program in Software Engineering;
 Chicago, IL; 60680 United States

Degrees: MS CS, PHD CS

Contact: Dr. Chang, Carl K.
Assistant Professor
(312) 996-4860

Courses: **Introduction to Software Engineering** EECS 274 U P R O
Textbooks: *Software Engineering*, Sommerville, I.
Systems: PDP-11/70 UNIX

Advanced Topics in Software Engineering EECS 481 G P E Y
Textbooks: *Software Engineering: Analysis and Verification*, Lewis
Systems: VAX-11/750 UNIX BSD 4.2

Software Engineering Environments EECS 482 G P E Y
Textbooks: *Software Engineering Environments*, Hunke
Software Engineering Environments, IEEE Tutorial
Systems: VAX-11/750 UNIX BSD 4.2

Additional Information:

Introduction to Software Engineering is offered twice a year.
Dr. Carl Chang is currently organizing the "Software Engineering Laboratory"
for this department.

University of Illinois at Urbana-Champaign;
Department of Electrical and Computer Engineering;
Program in Computer Engineering;
Urbana, IL; 61801 United States

Degrees: BS

Contact: Prof. Loui, Michael C.
Associate Professor
(217) 333-2595

Courses: **On-Line Computing** EE 291 U P R T
Textbooks: *IBM PC 8088 Macro Assembler Programming*, Rollins, Dan
Systems: Zenith 158 with RS-232 port for interfacing to I/O devices

Advanced Artificial Intelligence Programming Methods EE 443 G P E X
Textbooks: *Artificial Intelligence Programming*, Chamiak, Eugene et al.
Systems: Pyramid

Additional Information:

On-Line Computing deals with the design and implementation of very large
assembly level programs for real-time control of devices. Software engineering
techniques are stressed.

University of Iowa, School of Engineering;
Department of Electrical and Computer Engineering;
Iowa City, IA, 52242 United States

Degrees: BS EE, MS, PHD

Contact: Prof. Reddy, S. M.
Professor and Chairman
(319) 353-7379

Courses: **Introduction to Software Design** 55.033 U P R T
 Textbooks: *Programming and Problem Solving with Pascal*, Schneider
Motorola M68000 Programmers Manual
 Systems: VAX 11/750 (4.2 BSD UNIX) Cross development environment
 M68000-based microprocessor systems

University of Maryland: Division of Mathematical and Physical Sciences and Engineering;
 Department of Computer Science;
 College Park, MD; 20742 United States

Contact: Prof. Austing, Dick
 Associate Chairman for Education
 (301) 454-2002

Courses: **Software Design and Development** CMSC 435 U N X X
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

University of Massachusetts: School of Engineering;
 Department of Electrical and Computer Engineering;
 Program in Electrical Engineering;
 Amherst, MA; 01003 United States

Degrees: BS EE, BS CSE, MS, PHD

Contact: Prof. Pradhan, Dhiraj K.
 Professor
 (413) 545-0160

Courses: **Design and Analysis of Computer Algorithm** ECE 672 G P E D
 Textbooks: *The Design and Analysis of Computer Algorithms*, Aho, Alfred V., Hopcroft, John E. and Ullman, Jeffrey D.
 Systems: Data General Eagle

Programming Structures ECE 544 G P E T

Algorithms and Data Structures ECE 597B G N E Y
 Textbooks: *Algorithms*, Sedgewick, R.
 Systems: VAX

Performance Evaluations ECE 673 G P E Y

University of Massachusetts at Boston:
 Department of Mathematics and Computer Science;
 MS CS;
 Boston, MA; 02125 United States

Degrees: BS, MS

Contact: Dr. Simovici, Dan
 Professor and Director of the Graduate Program
 (617) 929-7966

Courses: **Software Engineering I** 650 G P R Y
 Systems: UNIX on VAXes 750

Software Engineering II 660 G P R Y
 Systems: UNIX on VAXes 750

Software Engineering Laboratory I 651 G P R Y
 Systems: UNIX on VAXes 750

Software Engineering Laboratory II 661 G P R Y
 Systems: UNIX on VAXes 750

University of Michigan-Dearborn; School of Engineering;
 Department of Industrial and Systems Engineering;
 Dearborn, MI; 48128 United States

Degrees: BSE ISE, MSE ISE

Contact: Dr. Kachhal, S. K.
 Chairman
 (313) 593-5272

Courses: **Software Engineering I** and SE 553 G P E Y
 Textbooks: *Software Design and Development*, Gilbert, Philip
Controlling Software Projects, Demario, Tom
 Systems: Michigan Terminal System (Amdahl)

University of Minnesota; Institute of Technology;
 Department of Computer Science;
 Minneapolis, MN; 55455 United States

Degrees: BA, BS, MS, PHD

Contact: Dr. Fox, David
 Head, Computer Science
 (612) 625-0726

Courses: **Software Engineering I 5180 B N X Y**
 Systems: Suns

Software Engineering II 5181 B P X Y
 Systems: Suns

University of New Hampshire; College of Engineering and Physical Sciences;
 Durham, NH; 03824 United States

Contact: Dr. Melvin, Donald W.
 Associate Dean
 (603) 862-3101

Courses: N X X

University of North Carolina at Chapel Hill (Entry 1); College of Arts and Sciences;
 Curriculum in Operations Research and Systems Analysis;
 Chapel Hill, NC; 27514 United States

Contact: Dr. Fishman, George S.
Chairman
(919) 962-8401

Courses: N X X

University of North Carolina at Chapel Hill (Entry 2); School of Arts and Sciences;
Department of Computer Science;
Chapel Hill, NC; 27514 United States

Degrees: BS, MS, PHD

Contact: Prof. Brooks, Frederick P., Jr.
Kenan Professor
(919) 962-2148

Courses: **Software Engineering Lab** Comp 145 B P B Y
Textbooks: *The Mythical Man-Month*, Brooks, Frederick P., Jr.
Tutorial on Software Design Techniques, Freeman and Wasserman
Systems: Sun Masscomp
VAX Ikonas
IBM PC

University of Oregon; School of Arts and Sciences;
Department of Computer and Information Science;
Eugene, OR; 97403 United States

Degrees: BA, BS, MA, MS, PHD

Contact: Prof. Eliason, Alan
Associate Professor
(503) 686-4408

Additional Information:
Software Methodology II is offered two to three times a year.
Other courses are offered in Expert Systems and Database Management Systems
at graduate level.

University of Ottawa; Faculty of Science and Engineering;
Department of Computer Science;
Ottawa, ON; K1N 9B4 Canada

Degrees: MCS, BS

Contact: Dr. Raymond, Jacques
Chairman of the Department
(613) 564-5420

Courses: **Problem Solving and Software Design** CSI 1100 U N X Y
Textbooks: *Algorithm Design I*, Birta, L.G. and Probert, R.L.
Pascal plus Data Structures, Dale, N. and Lilly, S.C.
CPN user's Manual, Hickey, Peter

Computing Systems Design and Implementation CSI 1101 U P X Y

Software Engineering CSI 3111 UN X O
Textbooks: *Software Engineering Methodology*, Turner, R.

Software Engineering: Practice CSI 4112 UN X X
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

Software Testing: Theory and Practice CSI 5111 GN X X

Software Engineering CSI 5112 GN X X

Additional Information:

B.Sc. Major and Honours with General Computer Science option.
B.Sc. Major and Honours with Information and Management System option.
Software Engineering is offered in the Winter and Summer terms.

University of Pennsylvania (Entry 1): School of Engineering and Applied Science;
Department of Systems;
Philadelphia, PA; 19104 United States

Degrees: BS E, MS E, PHD

Contact: Prof. Fegley, Kenneth A.
Chair
(215) 898-9390

Courses: N X X

University of Pennsylvania (Entry 2): School of Engineering and Applied Science;
Department of Computer and Information Science;
Program in Computer Science and Engineering;
Philadelphia, PA; 19104 United States

Degrees: BSE

Contact: Dr. Badler, Norman I.
Undergraduate Chair
(215) 898-5862

Courses: **Interactive System Design** CSE 280 UP E B
Textbooks: *Interactive Programming Environments*, Barstow, Shrobe, and Sandewall
Systems: IBM PC/XT/AT Vax 8650
Color Graphics

University of Pittsburgh: School of Library and Information Science;
Department of Information Science;
Program in Information System Design;
Pittsburgh, PA; 15260 United States

Degrees: MS

Contact: Prof. Williams, James G.
Chairman
(412) 624-5206

Courses: Software Engineering IS 276 G P E Y
 Systems: VAX/VMS
 IBM/XT

VAX/UNIX

University of Regina; Faculty of Science;
 Department of Computer Science;
 Faculty of Graduate Studies and Research;
 Regina, SK; S4S 0A2 Canada

Contact: Dr. Maguire, R. B.
 Head

Courses: N X X

University of San Francisco; School of Arts and Sciences;
 Department of Computer Science;
 San Francisco, CA; 94118 United States

Degrees: BS CS, MS CS

Contact: Prof. Gillespie, John
 Chairman
 (415) 666-6539

Courses: N X X

Additional Information:

We will be offering our 1st software engineering course Spring 87. It will be an upper division elective.

University of Saskatchewan; School of Engineering;
 Department of Computational Science;
 Program in Computer Science;
 Saskatoon, SK; S7N 0W0 Canada

Degrees: BS CS, BC CS, BO

Contact: Prof. Sorenson, Paul
 Head
 (306) 966-4886

Courses: Computer Systems CMPT 230.6 U P R Y
 Systems: VAX 8600

Information Systems Analysis and Design CMPT 477.6 U P E Y
 Textbooks: *Structured System Design*, Yourdon and Constantine
 Systems: VAX 8600 PC (Zeniths)
 Sun Workstations

Information Systems CMPT 876.3 G P E Y
 Systems: Sun Workstations VAX 8600

Additional Information:

Other degree offered: combined B.Sc. (Computer Science) and B.Eng.
(Electrical Engineering)

University of South Florida; College of Engineering;
Department of Computer Science and Engineering;
Tampa, FL; 33620 United States

Degrees: MS, PHD

Contact: Dr. Varanasi, M.R.
Graduate Program Coordinator
(813) 974-3033

Courses: **Software Engineering I - Basic Principles and Formal Methods** COP 6630 G N E B

Software Engineering II - Tools and Applied Techniques COP 6634 G P E B

University of Southern California (Entry 1); School of Engineering;
Department of Industrial and Systems Engineering;
Program in Human Factors;
Los Angeles, CA; 90089 United States

Degrees: MS ISE

Contact: Dr. Chigrell, Mark H.
(213) 743-2705

Courses: **Intelligent Interfaces** ISE 578 G P E Y
Textbooks: *Turbo Prolog*
Systems: IBM PCs with 512K and graphics running Turbo Prolog

Additional Information:

Intelligent Interfaces focuses on the use of machine reasoning and graphics to improve the human interface. It also covers issues relating to the modularity and maintainability of complex software. It stresses a logic programming approach.

University of Southern California (Entry 2); School of Engineering;
Department of Electrical Engineering;
Program in Computer Engineering;
Los Angeles, CA; 90089 United States

Degrees: MS CE, PHD CE

Contact: Mrs. Demetras, Diane
EE-Systems Student Affairs
(213) 743-3337

Courses: **Numerical Methods and Software for Electrical Engineering** EE 250 U N E X

Basic Organization of Computer Systems EE 357 U P E X

Introduction to Programming Systems Design CS/EE 455x U N E X

Artificial Intelligence EE 561 G P O X

Textbooks: *Problem Solving Methods in Artificial Intelligence*, Nilsson
Artificial Intelligence, Winston

Advanced Microcomputer-Based Design EE 560L O P E X**Basic Robotics Laboratory** EE 546L G P E X**Computer Vision/Machine Perception** EE 574 G P E X

Textbooks: *Machine Perception*, Nevatia

Symbolic Computation for Artificial Intelligence EE 592 G P E X**Expert Systems** EE 598 G P E X**Additional Information:**

Advanced Microcomputer-Based Design and Artificial Intelligence are members of a set of restricted electives, one of which is required.

University of Southern California (Entry 3): School of Engineering;
 Computer Science Department;
 Los Angeles, CA; 90089 United States

Degrees: MS CS, PHD CS

Contact: Dr. Scacchi, Walt
 Assistant Professor
 (213) 743-5501

Courses: **Introduction to Software Engineering** CS 201L U P R T

Textbooks: *The Practical Guide to Structural Systems Design*, Page-Jones, M.
Software Tools in Pascal, Kernighan

Systems: DEC VAX 11/750 IBM PC
 IBM XT

Design and Construction of Large Software Systems CS 477L U P E Y

Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
C Programming Language, Kernighan
Writing Efficient Programs, Bentley

Systems: DEC VAX 11/750 AT&T Workstations

Management of Computing: Theory and Practice CS 510 G N E Y

Systems: DEC VAX 11/750 IBM PC
 IBM XT IBM RT
 IBM AT AT&T Workstations

Design and Construction of Large Software Systems CS 577a G N E Y

Textbooks: *Interactive Programming Environments*, Barstow
Unix Programming Environment, Kernighan
Software Design Technique, Freeman

Systems: DEC VAX 11/750 AT&T Workstations

Design and Construction of Large Software Systems CS 577b G P E YTextbooks: *Advanced UNIX Programming*, Rockkind*C Reference Manual*, Harbison/Steele*A Practical Guide to UNIX System V*, Sobell

Systems: DEC VAX 11/750

AT&T Workstations

University of Tennessee at Chattanooga; School of Engineering;
 Department of Computer Science;
 Chattanooga, TN; 37403 United States

Degrees: BS CS, MS CS

Contact: Dr. Thompson, Jack
 Chair, CS Department
 (615) 755-4349

University of Texas at Austin; College of Natural Science;
 Department of Computer Science;
 Austin, TX; 78712 United States

Degrees: PHD, MS, BA

Contact: Dr. Werth, Laurie
 Lecturer
 (512) 461-7316

Courses: **Software Engineering** CS378 U N E TTextbooks: *Software Engineering Concepts*, Fairley, Richard E.*Software Engineering: A Practitioners Approach*, Pressman

Systems: Dec 20

VAX with UNIX or VMS

Large Scale Software Development CS G N E DTextbooks: *Metzger Project Management***Software Engineering Economics** EE 382M G N E YTextbooks: *Software Engineering Economics*, Boehm, Barry*Software Engineering Metrics and Models*, Conte, Dunsmore, and Shen**Additional Information:**

We integrate Software Engineering in the CS 1, CS 2 (Pascal) and Data
 Structures sequence at the undergraduate level.

University of Victoria;
 Department of Computer Science;
 Victoria, BC; V8W 2Y2 Canada

Degrees: BS, MS

Contact: Dr. Muzio, Jon C.
 Chairman
 (604) 721-7209

Courses: **Software Engineering** C SC 365 U P R T
 Textbooks: *The Mythical Man-Month*, Brooks, Frederick P., Jr.
 Systems: UNIX MS-dos

Formal Software Specification C SC 481A U N E D
 Textbooks: *Software Specification Techniques*, Gehani and McGettrick
 Systems: UNIX

Additional Information:

Software Engineering/Education Cooperative Project - a joint project with IBM Canada to advance the state of the art in educational software.

University of Virginia; School of Engineering and Applied Science;
 Department of Computer Science;
 Program in Computer Science;
 Charlottesville, VA; 22901 United States

Degrees: BS, MS, MCS, MS CS, PHD, PHD CS

Contact: Prof. Catlin, Avery
 Chairman
 (804) 924-7605

Courses: **Software Engineering** CS 485 U P R Y
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: Primes

Software Engineering CS 685 G P E Y
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
 Systems: Primes AT&T 3B5

Software Engineering CS 885 G N E D

University of Washington; College of Arts and Sciences;
 Department of Computer Science;
 Seattle, WA; 98195 United States

Degrees: BS CS, MS CS, PHD CS

Contact: Prof. Notkin, David
 Assistant Professor
 (206) 545-3798

Courses: **Software Engineering** CSci 503 G P E Y
 Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
The Mythical Man-Month, Brooks, Frederick P., Jr.
 Systems: PC-RT/UNIX XEROX XDE

University of Waterloo; Faculty of Mathematics;
 Department of Computer Science;
 Waterloo, ON; N2L 3G1 Canada

Degrees: BM, MM, PHD

Contact: Dr. Dymont, Doug
Associate Chairman
(519) 888-4451

Courses: **Applications Software Engineering** CS 430 U P E O
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.

Business System Analysis CS 432 U P E Y

Software System Design and Implementation CS 446 and CS 646 B P E Y
Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman, R.

Techniques In Systems Analysis CS 482 U P E O

Additional Information:

Applications Software Engineering and Techniques in Systems Analysis are offered in the Fall and Spring terms.

University of Wisconsin-Madison; College of Engineering;
Department of Industrial Engineering;
Madison, WI; 53706 United States

Degrees: MS, PHD

Contact: Prof. Gustafson, David H.
Department Chairman
(608) 262-3768

Courses: **Computer Methods in Industrial Engineering** 490-612-9 G N B Y
Textbooks: *Software Engineering*, Sommerville, I.
Systems: IBM-PC

University of Wisconsin-Milwaukee; School of Engineering and Applied Science;
Department of Electrical Engineering and Computer Science;
Milwaukee, WI; 53201 United States

Degrees: MS CS, PHD

Contact: Dr. Vairavan, K.
Chair - CS
(414) 963-5183

Courses: **Introduction to Software Engineering** 262-536 B P X Y
Textbooks: *Operating System Elements — A User Perspective*, Calingert
Systems: VAX-750 (UNIX) 68000's

Introduction to Operating Systems 262-537 B P X Y
Textbooks: *Software Engineering*, Pressman
C Programming Language, Kerningham
Systems: VAX-750 68000 Based System

University of Wyoming; College of Arts and Sciences;
Department of Computer Science;
Laramie, WY; 82071 United States

Contact: Dr. Bauer, Henry R.
Chairman

Courses: N X X

Utah State University: College of Science;
Department of Computer Science;
Logan, UT; 84322 United States

Degrees: BS, MS

Contact: Prof. Jones, Greg
Associate Professor
(801) 750-3267

Courses: **Software Development/Implementation** CS 655-6 G P R O
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
Systems: VAX 11/780 PC-clones
HP 9000 Macintosh

Software Systems CS 456 U P R O
Textbooks: *Software Engineering Methodology*, Turner
Systems: VAX 11/780

Additional Information:

Software Development/Implementation is offered 2 times/year and Software Systems is offered 3 times/year.

Vanderbilt University: School of Engineering;
Department of Computer Science;
Nashville, TN; 37235 United States

Degrees: BA, BS, MS, ME, PHD

Contact: Dr. Schach, Stephen R
Director of Graduate Studies
(615) 322-2924

Courses: **Software Engineering** CS352 G P E Y
Textbooks: *Ada, an Advanced Introduction*, Gehani, Narain
Systems: VAX 11/785

Villanova University: College of Liberal Arts and Sciences;
Mathematical Sciences Department;
Villanova, PA; 19085 United States

Degrees: BS M, BS CS

Contact: Dr. Joyce, Daniel
(215) 645-7344

Courses: **Software Engineering** CSC 4700 U P E Y
Systems: VAX/VMS

Virginia Commonwealth University; School of Arts and Sciences;
 Department of Mathematical Sciences;
 Program in Computer Science;
 Richmond, VA; 23284 United States

Degrees: BA, BS, MA, MS

Contact: Dr. Haver, William E.
 Department Chairman
 (804) 257-1301

Courses: **Software Engineering** 591 B P E D

Textbooks: *Software Engineering*, Sommerville, I.

Systems: IBM PC

IBM 3170

IBM PC/AT

Pyramid mini-computer network

Wang Institute of Graduate Studies; School of Information Technology;
 Tyngsboro, MA; 01879 United States

Degrees: MSE

Contact: Dr. Fairley, Richard E.
 Chair of Faculty
 (617) 649-9371

Courses: **Application of Formal Methods** G N R X

Textbooks: *The Theory of Parsing, Translation, and Compiling*, Aho, A.V. and Ullman, J.D.

Data Structures and Algorithms, Aho, A.V., Hopcroft, J.E., and Ullman, J.D.

Computers and Intractability: A Guide to the Theory of NP-Completeness, Garey, M.R. and Johnson, D.S.

Pattern Matching with Regular Expression Notation in UNIX, Gill, T.

Toward a Theory of Test Data Selection, Goodenough, J. and Gerhart, S.

Introduction to the Formal Treatment of Testing, Gourlay, J.S.

The Science of Programming, Gries, D.

Untitled (Text on Abstraction), Guttag, J.V. and Liskov, B.

Abstract Data Types and Software Validation, Guttag, J.V., Horowitz, E., and Musser, D.R.

An Axiomatic Approach to Computer Programming, Hoare, C.A.R.

Procedures and Parameters-An Axiomatic Approach, Hoare, C.A.R.

Introduction to Automata Theory, Languages, and Computation, Hopcroft, J.E. and Ullman, J.D.

Fundamentals of Data Structures, Horowitz, E. and Sahni, S.

Rationale for the Design of the Ada Programming Language, Ichbiah, J.D., Heliard, J.D., and Roubine, O.

Software Development: A Rigorous Approach, Jones, C.B.

Abstraction Mechanisms in CLU, Liskov, B., Snyder, A., Atkinson, R., and Schaffert, C.

A Technique for Software Module Specification with Examples, Parnas, D.

The Impact of Abstraction Concerns on Modern Programming Languages, Shaw, M.

A Survey of Analysis Techniques for Discrete Algorithms, Weide, B.

Programming Methodology G P R X

Textbooks: *Software Technology in the 1990's*, Balzer, R., Cheatham, T., and Green, C.

Software Testing Techniques, Beizer, B.

Writing Efficient Programs, Bentley, J.L.

A Guided Tour of Program Design Methodologies, Bergland, G.D.

Software Design Strategies, Bergland, G.D. and Gordon, R.D.

Indian Hill C Style and Coding Standards, Connon, L.W.

Structured Systems Analysis: Tools and Techniques, Gane, C. and Sarson, T.

Formal Validation of a Simple Database Application, Gerhart, S.L.

Software Maintenance Guidebook, Glass, R.L. and Noiseux, R.A.

Abstraction and Specification in Program Design, Guttag, J. and Liskov, B.

Using Documentation as a Software Design Medium, Hester, S.D., Parnas, D.L., and Utter, D.F.

A Survey of Static Analysis Methods, Howden, W.E.

A Survey of Dynamic Analysis Methods, Howden, W.E.
Constructive Methods of Program Design, Jackson, M.
Information Systems: Modeling, Sequencing, and Transformation, Jackson, M.
Literate Programming, Knuth, D.E.
Modular Program Construction Using Abstractions, Liskov, B.
Software Maintenance, Martin, J. and McClure, C.
The Art of Software Testing, Myers, G.J.
A Practical Guide to Structured Systems Design, Page-Jones, M.
Beyond Programming Languages, Winograd, T.

Systems: Pascal profilers
 AFFIRM

Softool
 Prolog

Management Concepts G N R X

Textbooks: *Business Policy and Planning*, Rogers, D.

Management: Foundations and Practices, McFarland, D.
Writing for Decision Makers, Holcombe, M. and Stein, J.
Notizen zu Interaktiven Systemen, McKeeman, W.M.
Data Processing Contracts, Brandon, D. and Segelstein, S.
Theory Z: How American Business Can Meet the Japanese Challenge, Ouchi, W.
Japanese Management, Cho, S.
A Company Faced with Rapid Assimilation of a New Technology, McKeeman, W.M.
An Aerospace Company, McKeeman, W.M.
In Search of Excellence: Lessons from America's Best-Run Companies, Peters, T. and Waterman, R.
Executive Style-German Bosses Stress Consensus Decisions, Technical Know-How, Anders, G.
Two Lessons in Failure from Silicon Valley
Marketing Management Analysis, Planning, and Control, Kotler, P.
Marketing Decision Making, Concepts and Strategy, Cravens
Managerial Finance: Essentials, Kroncke, C., Nammers, E., and Grunewald, A.
How to Read a Financial Report, Merrill Lynch Pierce Fenner and Smith
Conflict Negotiation, Situation Management, Inc.
Management: Basic Elements of Managing Organizations, Webber, R.
Japan: The Story of a Nation, Reischauer, E.
Management Tools for Everyone, Erickson, S.
Scribe - Document Production System - User Manual, Reid, B. and Walker, J.
Software Engineering Economics, Boehm, B.
Managing Software Projects, Fairley, Richard E.
The Mythical Man-Month, Brooks, Frederick P., Jr.
A Close Look at Brook's Law, Gordon, R. and Lamb, J.
Further Up the Organization, Townsend, R.
What American and Japanese Managers are Learning from Each Other, Rehder, R.
Data Protection by Self-Aware Computing Systems, McKeeman, W.M.
Computer Software - Its Nature and Its Protection, Keplinger, M.
Computers, Software and the Law, Zammit, J.
Burroughs Faces More Lawsuits Over Computers, Trammer, M.
Burroughs Strikes Back at Militant Customer, Apear, L.
Accounting - Planning and Control, Wade, L.
High Technology Shoot-Out: Japan vs. USA
Situation Management Systems, O'Brien, L.
The UNIX Writer's Workbench Software: Philosophy, Frase, L.
Graphical Abstractions of Technical Documents, Perlman, G. and Erickson, T.

Systems: WICOMO
 Writing Aids on Wang VS and Wang PC
 Workbreakdown Charts on Apple Lisa
 Spreadsheets
 Ingres on VAX

Writer's Workbench
 Scribe
 Pert on Apple Lisa
 Database PCDB on Wang PC

Computing Systems Architecture G N R X

Textbooks: *Structured Computer Organization*, Tanenbaum, Andrew S.

Advances in Computer Architecture, Myers, Glenford J.
Soul of a New Machine, Kidder, Tracy

Software Engineering G P R X

Textbooks: *Software Engineering Economics*, Boehm, B.

System Development Methodology, Hice, G.F., Turner, W.S., and Cashwell, L.F.

Managing a Programming Project, Metzger, P.W.

Tutorial: Software Management, Reifer, D.J.

Software Engineering Concepts and Techniques, Buxton, J.M., Naur, P., and Randell, B.

Organizing a Successful Management Needs Analysis, Newell, G.E.

Standardized Development of Computer Software, Part I: Methods, Tausworthe, R.C.

Standardized Development of Computer Software, Part II: Standards, Tausworthe, R.C.

Specifying Software Requirements for Complex Systems: New Techniques and Their, Heninger, K.L.

Using Documentation as a Software Design Medium, Hester, S.D., Parnas, D.L., and Utter, D.F.

Development Support Libraries, Baker, F.T.

Structured Programming in a Production Programming Environment, Baker, F.T.

Structured Walk-Throughs, Basili, V.R.

A Controlled Experiment in Program Testing and Code Walkthroughs/Inspections, Myers, G.J.

Chief Programmer Teams: Principles and Procedures

The Systems Analysis Workbook: A Complete Guide to Project Implementation and, Carlsen, R.D. and Lewis, J.A.

Survival Kit for Software Producers

Life-Cycle Software Validation, Howden, W.E.

Programs, Life Cycles and Laws of Software Evolution, Lehman, M.M.

A Tutorial Primer for PSL/PSA

Problem Statement Language: PSL Language Reference Summary

Using PSA Under Digital Vax/VMS, Stedwell, M.J.

The Use of PSL/PSA with Structured System Development Methods: Surveys and Sy

PSL/PSA: A Computer-Aided Technique for Structured Documentation and Analysis, Teichroew, D. and Hershey, E.A.

Application of a Methodology for the Development and Validation of Reliable P, Ramamoorthy, C.V.

System Engineering vs. Communications Engineering, Rybicki, C.A.M. and Taylor, L.L.

Systems: PSL/PSA

RCS

Make

Scribe

Ingres

CMS

MMS

Project Management G P R X

Textbooks: *Developing Managerial Skills in Engineers and Scientists*, Badway, M.K.

Software Engineering Economics, Boehm, Barry

Software Engineering Concepts, Fairley, Richard E.

Managing a Software Project, Metzger, Phillip

Systems: PERT Package

MultiPlan

Apple Lisa graphics

Gantt Package

WICOMO Cost Model

Project I G P R X

Project II G P R X

Database Management Systems G P E X

User Interfaces G P E X

Workstation Design and Graphics G P E X

Introduction to VLSI Design G P E X

Validation and Verification G P E X

Expert Systems Technology G P E X

Translator Implementation G P E X

System Design Algorithms G P E X

A Quantitative Approach to Managing and Engineering Software G P E X

Operating Systems G P E X

Principles of Computer Networks G P E X

Additional Information:

Directed Study: Independent study on special topics under faculty guidance.

Requires consent of instructor.

Summer Institute in Computer Science: Series of short, intensive, non-credit courses covering a variety of topics in computer science and software engineering.

Washington State University; College of Sciences and Arts;
Department of Computer Science;
Pullman, WA; 99164 United States

Degrees: BS, MS, PHD

Contact: Dr. Benson, David B.
Professor
(509) 335-2706

Courses: **Software Development** CptS 422 U P E Y

Textbooks: *Software Engineering: A Practitioner's Approach*, Pressman, R.

C: An Advanced Introduction, Narain, G.

Introducing the UNIX System, McGilton and Morgan

The Mythical Man-Month, Brooks, Frederick P., Jr.

The UNIX C Shell Field Guide, Anderson, G. and P.

Systems: UNIX Systems

Software Development Lab CptS 423 U P E Y

Textbooks: *Introducing the UNIX System*, McGilton and Morgan

A Book on C, Kelley and Pohl

Systems: UNIX Systems

Verification CptS 522 G P E Y

Textbooks: *The Science of Programming*, Gries

Additional Information:

Research opportunities in system software engineering, software test concepts, distributed computing concepts, esp. theory.

Washington University (Entry 1); School of Engineering and Applied Science;
Department of Systems Science and Mathematics;
St. Louis, MO; 63130 United States

Degrees: BSSE, MSSM, SCD SSM

Contact: Dr. Katz, I. N.
(314) 889-6083

Courses: Numerical Methods SSM 465 A B P R TTextbooks: *Elementary Numerical Analysis: An Algorithmic Approach*, Conte and DeBoor

Systems: VAX/750 IBM/PC

Introduction to Optimization and Decisions SSM 381 U P R YTextbooks: *Introduction to Operations Research*, Lieberman, Hillier

Systems: IBM/PC VAX/750

Control Systems Design SSM 431 B P R YTextbooks: *Automatic Control Systems*, Kuo, B.C.

Systems: VAX/750 IBM/PC

Washington University (Entry 2); Sever Institute of Technology;

Department of Computer Science;

St. Louis, MO; 63130 United States

Degrees: B, M, PHD**Contact:** Prof. Roman, Gruia-Catalin

Associate Professor in Computer Science

(314) 889-6190

Courses: Programming Systems and Language CS 455 B P R OTextbooks: *Programming Languages, Design and Implementation*, Pratt*Formal Specification of Programming Languages*, Pagan**Software Engineering Workshop CS 456 B P R O**Textbooks: *Software Engineering with Modula-2 and Ada*, Wiener**Distributed System Design CS 576S G P E X**Textbooks: *Coordinated Computing--Tools and Techniques for Distributed Software*, Filman**Additional Information:**

Programming Systems and Languages and Software Engineering Workshop are offered twice yearly.

Wayne State University; College of Engineering;

Department of Electrical and Computer Engineering;

Detroit, MI; 48202 United States

Degrees: BS, MS, PHD**Contact:** Prof. Meisel, Jerome

Acting Chair

(313) 577-3920

Courses: Engineering Software Design ECE 660 G P X Y

Systems: Amdhal 470 V8

IBM 4381

IBM 3081

MTS (Michigan Terminal System)

Additional Information:

The course ECE 660 has been taught both at campus and at the Ford premises under Ford/WSU Master's program in Electronics and Computer Control System. The students have been using PSL/PSA from ISDOS.

West Virginia College of Graduate Studies (WVCOGS); Engineering and Science Division;
Information Systems;
Institute, WV; 25112 United States

Degrees: MS

Contact: Prof. Hutton, Robert N.
Associate Professor
(304) 768-9711 x456

Courses: **Systems Analysis Techniques** IS 605 G N R Y
Textbooks: *Structured Analysis Methods for Computer Information Systems*, Teagar and Pidgeon
System Design IS 610 G P R Y
Textbooks: *Business Computer Systems Design*, Dolac
Systems: VM/CMS

Additional Information:

We plan to begin a course in "Software Engineering Using Ada", starting Spring '87. At this time, the text has not been chosen.

West Virginia University; College of Arts and Science;
Department of Statistics and Computer Science;
Morgantown, WV; 26506 United States

Degrees: BS, MS

Contact: Prof. Butcher, Donald F.
Professor and Chairman
(304) 293-3607

Courses: **Software Engineering** CS 275 B N E Y
Textbooks: *Software Engineering*, Sommerville, I.
Systems: VAX

Ada with Software Engineering CS 291/491 B P E Y
Textbooks: *Software Engineering with Ada*, Booch, Grady
Systems: VAX

Principles of Software Development CS 170 U P E Y
Systems: VAX

Western Michigan University;
Department of Computer Science;
Program in Computer Science;
Kalamazoo, MI; 49008 United States

Degrees: BS CS, MS CS

Contact: Prof. Nelson, J. Donald
Chairman
(616) 383-6151

Courses: **Software Systems Development** 544 B P B O
Textbooks: *Software Engineering - A Practitioners Approach*, Pressman
The Mythical Man Month, Brooks, Frederick P., Jr.
Systems: DECsystem-10 (being phased out) VAX/VMS
VAX/UNIX various microcomputers

Additional Information:

Software Systems Development is offered 3 times/year.

Wichita State University: College of Liberal Arts and Sciences;
Department of Computer Science;
Wichita, KS; 67208 United States

Degrees: MS, MCS, BS, BA

Contact: Prof. Edgington, Mary
Professor
(316) 689-3156

Courses: **Introduction to Software Engineering** CS 580 B P B T
Textbooks: *Software Engineering Concepts*, Fairley, Richard E.
The Mythical Man Month, Brooks, Frederick P., Jr.
Systems: HARRIS 800 VAX 11/750
IBM 3031D

Wright State University: College of Science and Mathematics/College of Engineering and Computer Science;
Department of Computer Science;
Programs in Computer Science, Computer Engineering, and Computer Science and;
Dayton, OH; 45435 United States

Degrees: BA, BS, BS CE, MS, PHD

Contact: Prof. Carson, Howard V.
Assistant to the Chair
(513) 873-2491

Courses: **Software Engineering I** Software Engineering 760 G P E Y
Textbooks: *Software Engineering with Ada*, Booch, Grady
Classics in Software Engineering, Yourdon, Edward Nash
Systems: DEC VAX-11/750 running VMS

Software Engineering II Software Engineering 761 G N E Y
Textbooks: *Writings of the Revolution: Selected Readings on Software Engineering*, Yourdon, Edward
Systems: DEC VAX-11/750 running VMS

Real-Time Software Design Computer Engineering 431/631 B P R T
Textbooks: *Operating Systems Concepts*, Peterson, J.L. and Silberschatz, Abraham
Systems: A DEC PDP-11/44 running RSX-11M LSI-11 microprocessor workstations

Data Structures and Software Design Computer Science 400/600 B P R T
Textbooks: *Fundamentals of Data Structures in Pascal*, Horowitz, Ellis and Sahni, Sartaj
Systems: DEC VAX-11/750 running VMS

Additional Information:

Data Structures and Software Design involves a little software engineering.
A local area network of eight SUN-3 UNIX workstations with high-resolution
terminals, including one color display, will be available in 1987 to provide
a powerful software development environment.

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